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1988
Joint Association
SURVEY ON DRILLING COSTS

SPONSORED BY:

- American Petroleum Institute
- Independent Petroleum Association of America
- Mid-Continent Oil & Gas Association

American Petroleum Institute
1220 L Street, Northwest
Washington, D.C. 20005

1988

Joint Association SURVEY ON DRILLING COSTS

Finance, Accounting
and Statistics Department

American
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PREFACE

The purpose of the Joint Association Survey is to provide annual information pertaining to the cost of drilling oil and gas wells and dry holes in the United States.

As in prior years, data for the 1988 JAS were collected from the petroleum industry through the joint efforts of the American Petroleum Institute, the Independent Petroleum Association of America, and the Mid-Continent Oil and Gas Association.

Washington, D.C.
October 1989

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1988
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SURVEY ON DRILLING COSTS

SUMMARY OF FINDINGS. Findings pertaining to 1988 drilling costs and activity in the United States may be summarized as follows:

- The **total cost** of drilling and equipping oil and gas wells and dry holes in 1988 amounted to approximately $10,550 million, an increase of 14.2 percent from 1987.

- The **average depth of oil wells** completed in 1988 was 4,486 feet, an increase of 6.4 percent; the **average cost per** foot in 1988 was $62.28, an increase of 6.7 percent from the previous year.

- The **average depth of gas wells** completed in 1988 was 5,438 feet, a decrease of 0.6 percent; the **average cost per foot** in 1988 was $84.65, an increase of 21.7 percent from the previous year.

- The **average depth of dry holes** drilled in 1988 was 5,472 feet, an increase of 7.8 percent; the **average cost per foot** was $66.96, an increase of 31.2 percent from 1987.

- The **total number of wells drilled** in 1988 decreased 10.0 percent and the **total footage drilled** decreased 4.5 percent.

- The **total cost of offshore wells** completed in 1988 amounted to approximately $2,695 million, an increase of 31.3 percent from 1987. The **total number of offshore wells** increased 22.1 percent from 1987 while the **average depth** increased 4.0 percent. The **average cost per foot** in 1988 was $288.68, an increase of 3.3 percent.

- The comparison of drilling activity and the cost of various types of wells completed in 1987 and 1988 is as follows:

	Oil Wells		Gas Wells	
	1987	1988	1987	1988
Wells Drilled	15,326	12,434	7,255	7,820
Footage Drilled (000)	64,602	55,781	39,674	42,522
Total Cost (millions)*	$3,769	$3,474	$2,759	$3,600
Average Depth (feet)	4,215	4,486	5,469	5,438
Average Cost Per Well*	$245,950	$279,408	$380,354	$460,295
Average Cost Per Foot*	$58.35	$62.28	$69.55	$84.65

	Dry Holes		Total Wells	
	1987	1988	1987	1988
Wells Drilled	10,460	9,487	33,041	29,741
Footage Drilled (000)	53,081	51,912	157,357	150,216
Total Cost (millions)*	$2,710	$3,476	$9,239	$10,550
Average Depth (feet)	5,075	5,472	4,762	5,051
Average Cost Per Well*	$259,068	$366,381	$279,615	$354,713
Average Cost Per Foot*	$51.05	$66.96	$58.71	$70.23

*Includes all costs incurred for drilling and equipping wells through the "Christmas tree."

NOTE: Totals may not agree with the sum of the individual items because of independent rounding.

DESCRIPTION OF SURVEY. The 1988 Joint Association Survey (JAS) contains information on drilling costs derived from a sample of wells, footage, and costs collected from operators of different sizes who drilled wells in various areas of the United States. The drilling costs reported are those incurred for drilling and equipping wells through the "Christmas tree."

Estimates of drilling costs were derived by combining sample data with the 1988 drilling statistics as compiled by the American Petroleum Institute (API) and the Committee on Statistics of Drilling of the American Association of Petroleum Geologists (AAPG-CSD). The procedures for preparing these estimates for the 1988 JAS are described in the following sections.

DEFINITIONS. Copies of the 1988 questionnaire, instructions, and definitions may be found in Appendixes B and C. Maps showing geographic subdivisions of Alaska, California, Louisiana, New Mexico, Texas, Offshore Federal Waters Alaska, Offshore Federal Waters Atlantic Coast, Offshore Federal Waters Gulf of Mexico-Northern, and Offshore Federal Waters Pacific Coast are shown in Appendix G.

THE 1988 UNIVERSE. In 1985, the American Petroleum Institute replaced its system of reporting well completions by month of report, (the Quarterly Review of Drilling Statistics), with a dynamic system of reporting wells by month of completion, (the Quarterly Completion Report). This change was instituted to correct the distortions in the data caused by the long lag time between the actual well completion and the reporting of the completion. As a result of these changes, there will be no "final" count of the survey year well completions until three to five years after the end of the survey year. The 1988 Joint Association Survey universe of wells is comprised of all wells reported to the American Petroleum Institute by Petroleum Information Corporation and by respondent operators through August 10, 1989 as having been completed during calendar year 1988. In prior years, survey year wells were added to the universe through the end of September of the publishing year to capture as many well completions as possible. However, as the number of additional wells reported during September has been relatively small, it was decided that earlier publication of the drilling cost estimates was of greater value than the additional wells added to the universe.

As the actual total number of well completions in any survey year is unknown for several years due to the lag in reporting, the API makes estimates of the number of total completions based on historic reporting patterns. The estimate of total well completions for 1988 based on reports received through the end of June, 1989 was 32,266 as compared to the 29,741 wells contained in the 1988 JAS universe.

THE 1988 SAMPLE. As in previous years, questionnaires were mailed to operators which were recorded as having drilled wells in the different areas of the United States during 1988. Replies to the Survey were contingent upon voluntary responses, with a continued effort being made to increase the sample size, particularly with respect to the smaller operators. An analysis of the number of companies (operators), classified by the number of wells drilled, included in the sample for the years 1984-1988 is shown in Appendix F.

The number of oil wells, gas wells, and dry holes reported to the JAS in 1987 and 1988 as percentages of total wells drilled in each of the six selected states is as follows:

	Percent of Total					
	Oil Wells		Gas Wells		Dry Holes	
	1987	1988	1987	1988	1987	1988
California	90	82	47	52	75	60
Kansas	34	33	58	63	37	35
Louisiana	52	52	44	61	46	52
New Mexico	63	66	54	82	52	63
Oklahoma	34	38	52	50	41	46
Texas	49	52	48	51	37	38

The following tabulation shows the total number of wells and footage reported to the JAS in 1987 and 1988 as compared to the wells and footage which comprised the JAS drilling universe for these two years.

	1987 Survey			1988 Survey		
	Total	Sample	Percent of Total	Total	Sample	Percent of Total
Oil Wells	15,326	7,810	51.0	12,434	6,234	50.1
Footage (thousands)	64,602	36,201	56.0	55,781	30,420	54.5
Total Cost (millions)	$3,769	$2,517	66.8	$3,474	$2,054	59.1
Gas Wells	7,255	3,042	41.9	7,820	3,675	47.0
Footage (thousands)	39,674	20,068	50.6	42,522	22,880	53.8
Total Cost (millions)	$2,759	$1,621	58.8	$3,600	$2,274	63.2
Dry Holes	10,460	4,177	39.9	9,487	4,085	43.1
Footage (thousands)	53,081	26,250	49.5	51,912	27,711	53.4
Total Cost (millions)	$2,710	$1,625	60.0	$3,476	$2,273	65.4
Total Wells	33,041	15,029	45.5	29,741	13,994	47.1
Footage (thousands)	157,357	82,519	52.4	150,216	81,010	53.9
Total Cost (millions)	$9,239	$5,763	62.4	$10,550	$6,601	62.6

NOTE: Totals may not agree with the sum of the individual items because of independent rounding.

DETERMINATION OF UNREPORTED WELLS AND FOOTAGE. Individual wells (and footage) derived by adjustment of QCR data were classified according to type of well (oil, gas or dry), location, and depth. Individual wells reported to the JAS were classified in like manner. The wells and footage reported to the JAS in each category were subtracted from the number of wells and footage in corresponding categories for the adjusted universe. The difference represented the unreported wells and footage by type of well, location, and depth interval.

ESTIMATION OF TOTAL COSTS. The average cost per foot drilled in each category was computed on the basis of information reported to the JAS. Based on the sample wells reported for each area, least squares regression analysis was used to determine the functional relationship between the cost per foot and well depth for each type of well. (See Appendix H for a description of the methodology.)

The cost per foot for the unreported wells in each category was then estimated from the least squares analysis for each area. For the relatively few unreported wells falling outside the depth range of the sample, for which regression analysis did not provide meaningful estimates, cost estimates were based on an analysis of costs in similar areas and of prior years' data. This was necessary for approximately 4.2 percent of all unreported wells.

The cost per foot for the unreported wells was then multiplied by the unreported footage in each depth range to obtain the unreported cost for each category. Total estimated expenditures were obtained by adding the reported costs to estimated unreported costs.

FINDINGS FOR 1988. Cost data are shown in Tables 1-53 for the Total United States, Total Onshore United States, and Total Offshore United States as well as for Offshore Federal Waters and Gulf of Mexico-Northern.

Those wells drilled in the Atlantic Coast Federal Waters, Alaska Federal Waters, and Pacific Coast Federal Waters are not shown separately to avoid disclosure of proprietary data, but are included in Table 52, "Offshore Federal Waters" on page 58. However, total wells, footage, and costs for these areas are shown in Table 1.

In addition, expenditures are reported for the individual states and for the subdivisions of Alaska, California, Louisiana, New Mexico, and Texas.

SUMMARY OF SAMPLE DATA FOR 1988. Additional information concerning the cost of exploratory, development, single completion, and multiple completion wells as reported to the Joint Association

Survey is summarized for the United States in Appendixes D and E.

Sample data in these four categories, summarized by depth intervals for individual states, may be purchased from the American Petroleum Institute on magnetic tape or in the form of a computer listing. Data in either format are summarized to the extent necessary to avoid disclosure of individual well costs.

Requests for price quotations should be directed to: the Manager, Exploration and Production Statistics, Finance, Accounting, and Statistics Department, American Petroleum Institute, 1220 L Street, Northwest, Washington. D.C. 20005. (Note: Orders will be accepted only for the complete summary.)

TABLES CONTAINING FINDINGS

Please note that the average depth and cost per well have not been rounded upward on the following tables.

Table 1

TOTAL NUMBER OF WELLS, FOOTAGE DRILLED, AND ESTIMATED DRILLING

STATE	OIL WELLS			GAS WELLS		
	WELLS DRILLED	TOTAL FOOTAGE	COST	WELLS DRILLED	TOTAL FOOTAGE	COST
ALABAMA	27	269,205	19,533,662	176	454,186	33,981,359
ALASKA - ONSHORE	118	1,246,004	289,562,896	3	21,380	11,865,314
ALASKA - OFFSHORE	5	55,886	22,090,305	--	--	--
ALASKA - TOTAL	123	1,301,890	311,653,201	3	21,380	11,865,314
ARKANSAS	44	225,562	8,758,306	189	778,691	54,707,719
CALIFORNIA - NORTH	2	11,739	615,432	82	512,574	32,021,501
CALIFORNIA -CENTRAL COASTAL	75	246,549	23,440,425	--	--	--
CALIFORNIA - EAST CENTRAL	1,291	2,167,402	161,737,751	7	40,689	3,136,503
CALIFORNIA - SOUTH	62	184,228	28,899,867	--	--	--
CALIFORNIA - OFFSHORE	31	284,611	86,681,972	1	8,650	3,030,913
CALIFORNIA - TOTAL	1,461	2,894,529	301,375,447	90	561,913	38,188,917
COLORADO	227	1,341,523	49,791,391	506	2,704,812	122,672,817
FLORIDA	2	28,610	3,932,082	--	--	--
ILLINOIS	522	1,087,122	38,114,206	34	18,591	754,633
INDIANA	81	114,994	2,930,196	21	27,701	570,368
KANSAS	1,005	2,952,651	82,486,052	610	1,791,312	81,674,588
KENTUCKY	270	442,051	16,015,399	337	778,522	32,075,891
LOUISIANA - NORTH	294	973,467	35,771,015	268	1,383,407	81,968,250
LOUISIANA - SOUTH	220	1,708,168	171,321,667	130	1,622,651	284,540,297
LOUISIANA - OFFSHORE	124	1,243,018	295,858,260	113	1,356,454	436,534,964
LOUISIANA - TOTAL	638	3,924,653	502,950,942	511	4,362,512	803,043,511
MICHIGAN	73	336,072	11,731,272	319	872,702	120,686,087
MISSISSIPPI	107	1,101,997	77,200,009	27	143,859	18,342,714
MONTANA	92	545,061	31,890,829	73	119,880	3,254,643
NEBRASKA	38	190,406	6,551,038	--	--	--
NEW MEXICO - EAST	340	2,142,807	130,572,695	97	817,010	59,692,539
NEW MEXICO - WEST	54	320,730	20,075,012	226	787,604	58,396,462
NEW MEXICO - TOTAL	394	2,463,537	150,647,707	323	1,604,614	118,089,001
NORTH DAKOTA	138	1,187,342	75,870,718	1	14,201	1,334,610
OKLAHOMA	1,200	5,811,407	311,798,879	910	6,720,909	591,160,492
TEXAS RRC DIST. 1	453	1,603,211	56,360,793	71	462,610	41,444,352
TEXAS RRC DIST. 2	60	324,261	11,254,517	146	1,062,646	91,216,955
TEXAS RRC DIST. 3	283	1,791,533	111,974,565	148	1,259,937	105,590,821
TEXAS RRC DIST. 4	122	716,081	30,066,138	405	3,670,587	373,420,243
TEXAS RRC DIST. 5	98	381,750	17,351,013	33	330,937	26,311,083
TEXAS RRC DIST. 6	167	921,838	53,153,871	189	1,703,509	139,790,649
TEXAS RRC DIST. 7B	598	1,916,256	56,041,909	216	733,051	23,050,375
TEXAS RRC DIST. 7C	342	2,076,197	91,792,466	120	836,558	32,821,870
TEXAS RRC DIST. 8	1,149	7,140,479	374,081,312	54	335,517	35,354,974
TEXAS RRC DIST. 8A	683	4,114,763	178,596,436	3	18,360	643,181
TEXAS RRC DIST. 9	547	1,764,529	53,351,899	83	467,041	22,122,346
TEXAS RRC DIST. 10	172	773,160	39,111,283	134	1,106,710	69,107,705
TEXAS - OFFSHORE	5	60,908	16,334,610	65	674,002	192,341,420
TEXAS - TOTAL	4,679	23,584,966	1,089,470,812	1,667	12,661,465	1,153,215,974
UTAH	58	371,566	36,084,002	23	131,756	12,614,348
WYOMING	285	1,754,587	136,562,109	74	534,560	70,797,545
APPALACHIAN *	912	3,547,177	87,906,122	1,848	7,905,449	271,145,592
OFFSHORE FED. - ALASKA	--	--	--	--	--	--
OFFSHORE FED. - ATLANTIC	--	--	--	--	--	--
OFFSHORE FED. - GULF NORTH	13	162,763	87,941,234	13	124,597	60,243,505
OFFSHORE FED. - PACIFIC	5	52,201	17,789,525	--	--	--
OFFSHORE FED - TOTAL	18	214,964	105,730,759	13	124,597	60,243,505
OTHER UNITED STATES **	40	89,448	5,174,152	65	188,646	9,085,205
TOTAL OFFSHORE	183	1,859,387	526,695,906	192	2,163,703	692,150,802
TOTAL ONSHORE	12,251	53,921,933	2,947,465,386	7,628	40,358,655	2,907,354,031
TOTAL U.S.	12,434	55,781,320	3,474,161,292	7,820	42,522,358	3,599,504,833
EXPLORATORY WELLS	805	5,053,554	319,497,691	728	4,943,809	581,986,701
DEVELOPMENT WELLS	11,629	50,727,766	3,154,663,601	7,092	37,578,549	3,017,518,132

* INCLUDES NEW YORK, OHIO, PENNSYLVANIA, AND WEST VIRGINIA.

** INCLUDES ARIZONA, GEORGIA, IDAHO, IOWA, MARYLAND, MISSOURI, NEVADA, OREGON, SOUTH CAROLINA, SOUTH DAKOTA, TENNESSEE, VIRGINIA, AND WASHINGTON.

COSTS FOR OIL AND GAS WELLS, AND DRY HOLES, BY STATE - 1988

Table 1

DRY HOLES			TOTAL WELLS			
WELLS DRILLED	TOTAL FOOTAGE	COST	WELLS DRILLED	TOTAL FOOTAGE	COST	STATE
124	777,624	30,886,080	327	1,501,015	84,401,101	ALABAMA
4	48,484	13,293,726	125	1,315,868	314,721,936	ALASKA - ONSHORE
--	--	--	5	55,886	22,090,305	ALASKA - OFFSHORE
4	48,484	13,293,726	130	1,371,754	336,812,241	ALASKA - TOTAL
193	805,736	23,589,757	426	1,809,989	87,055,782	ARKANSAS
98	668,499	27,529,177	182	1,192,812	60,166,110	CALIFORNIA - NORTH
14	89,786	6,776,977	89	336,335	30,217,402	CALIFORNIA -CENTRAL COASTAL
52	345,474	32,429,489	1,350	2,553,565	197,303,743	CALIFORNIA - EAST CENTRAL
2	10,523	975,861	64	194,751	29,875,728	CALIFORNIA - SOUTH
2	21,793	13,242,953	34	315,054	102,955,838	CALIFORNIA - OFFSHORE
168	1,136,075	80,954,457	1,719	4,592,517	420,518,821	CALIFORNIA - TOTAL
336	1,896,305	51,015,701	1,069	5,942,640	223,479,909	COLORADO
8	102,902	11,064,401	10	131,512	14,996,483	FLORIDA
416	838,343	13,382,247	972	1,944,056	52,251,086	ILLINOIS
113	172,926	2,720,658	215	315,621	6,221,222	INDIANA
1,222	4,339,146	70,353,373	2,837	9,083,109	234,516,013	KANSAS
271	389,391	6,740,346	878	1,609,964	54,831,636	KENTUCKY
363	1,733,629	38,073,524	925	4,090,503	155,812,789	LOUISIANA - NORTH
325	3,614,407	354,725,771	675	6,945,226	810,587,735	LOUISIANA - SOUTH
285	3,110,519	709,687,341	522	5,709,991	1,442,080,565	LOUISIANA - OFFSHORE
973	8,458,555	1,102,486,636	2,122	16,745,720	2,408,481,089	LOUISIANA - TOTAL
239	1,262,176	77,145,281	631	2,470,950	219,562,640	MICHIGAN
207	1,745,928	78,218,637	341	2,991,784	173,761,360	MISSISSIPPI
158	664,093	36,842,505	323	1,329,034	71,987,977	MONTANA
95	520,941	11,670,061	133	711,347	18,221,099	NEBRASKA
134	1,063,613	52,825,104	571	4,023,430	243,090,338	NEW MEXICO - EAST
24	82,463	8,434,578	304	1,190,797	86,906,052	NEW MEXICO - WEST
158	1,146,076	61,259,682	875	5,214,227	329,996,390	NEW MEXICO - TOTAL
119	928,115	34,248,525	258	2,129,658	111,453,853	NORTH DAKOTA
957	5,275,073	241,834,563	3,067	17,807,389	1,134,793,934	OKLAHOMA
311	991,633	23,512,523	835	3,057,454	121,317,668	TEXAS RRC DIST. 1
198	1,229,451	62,351,342	404	2,616,358	164,822,814	TEXAS RRC DIST. 2
285	2,245,690	127,315,295	716	5,297,160	344,880,681	TEXAS RRC DIST. 3
261	1,909,557	114,832,614	788	6,296,225	518,318,995	TEXAS RRC DIST. 4
90	582,926	25,256,205	221	1,295,613	68,918,301	TEXAS RRC DIST. 5
132	896,833	32,971,088	488	3,522,180	225,915,608	TEXAS RRC DIST. 6
548	1,766,190	28,946,436	1,362	4,415,497	108,038,720	TEXAS RRC DIST. 7B
193	933,366	32,594,633	655	3,846,121	157,208,969	TEXAS RRC DIST. 7C
164	1,137,466	55,631,505	1,367	8,613,462	465,067,791	TEXAS RRC DIST. 8
217	1,451,575	44,130,505	903	5,584,698	223,370,122	TEXAS RRC DIST. 8A
412	1,471,251	26,010,785	1,042	3,702,821	101,485,030	TEXAS RRC DIST. 9
71	535,020	21,297,746	377	2,414,890	129,516,734	TEXAS RRC DIST. 10
100	1,026,588	248,867,198	170	1,761,498	457,543,228	TEXAS - OFFSHORE
2,982	16,177,546	843,717,875	9,328	52,423,977	3,086,404,661	TEXAS - TOTAL
41	211,073	15,763,413	122	714,395	64,461,763	UTAH
369	2,956,431	110,660,021	728	5,245,678	318,019,675	WYOMING
159	625,347	17,182,568	2,919	12,077,973	376,234,282	APPALACHIAN *
1	10,000	13,500,000	1	10,000	13,500,000	OFFSHORE FED. - ALASKA
--	--	--	--	--	--	OFFSHORE FED. - ATLANTIC
103	1,142,457	490,482,891	129	1,429,817	638,667,630	OFFSHORE FED. - GULF NORTH
--	--	--	5	52,201	17,789,525	OFFSHORE FED. - PACIFIC
104	1,152,457	503,982,891	135	1,492,018	669,957,155	OFFSHORE FED - TOTAL
71	281,357	36,842,609	176	559,451	51,101,966	OTHER UNITED STATES **
491	5,311,357	1,475,780,383	866	9,334,447	2,694,627,091	TOTAL OFFSHORE
8,996	46,600,743	2,000,075,630	28,875	140,881,331	7,854,895,047	TOTAL ONSHORE
9,487	51,912,100	3,475,856,013	29,741	150,215,778	10,549,522,138	TOTAL U.S.
4,597	27,425,124	2,109,956,567	6,130	37,422,487	3,011,440,959	EXPLORATORY WELLS
4,890	24,486,976	1,365,899,446	23,611	112,793,291	7,538,081,179	DEVELOPMENT WELLS

ESTIMATED COSTS OF DRILLING AND EQUIPPING WELLS, BY DEPTH INTERVALS - 1988

TOTAL UNITED STATES--1988 *

Table 2

	DEPTH INTERVAL (FEET)	TOTAL NUMBER OF WELLS, FOOTAGE DRILLED, AND COSTS				AVERAGE DEPTH AND COST PER WELL			
		OIL WELLS	GAS WELLS	DRY HOLES	TOTAL	OIL	GAS	DRY	TOTAL
WELLS		1,786	445	987	3,218				
FOOTAGE	0 - 1,249	1,523,198	367,677	750,307	2,641,182	853	826	760	821
COSTS $		70,462,695	12,284,021	13,503,719	96,250,435	39,453	27,605	13,682	29,910
WELLS		2,148	1,277	1,149	4,574				
FOOTAGE	1,250 - 2,499	3,817,421	2,354,055	2,109,171	8,280,647	1,777	1,843	1,836	1,810
COSTS $		172,194,247	112,383,817	47,251,289	331,829,353	80,165	88,006	41,124	72,547
WELLS		1,986	1,463	1,353	4,802				
FOOTAGE	2,500 - 3,749	6,250,303	4,546,076	4,297,848	15,094,227	3,147	3,107	3,177	3,143
COSTS $		256,087,156	236,380,617	101,300,126	593,767,899	128,946	161,573	74,871	123,650
WELLS		2,110	991	1,580	4,681				
FOOTAGE	3,750 - 4,999	9,335,911	4,298,445	6,900,768	20,535,124	4,425	4,337	4,368	4,387
COSTS $		340,679,955	162,456,519	167,928,917	671,065,391	161,460	163,932	106,284	143,359
WELLS		2,204	1,734	2,063	6,001				
FOOTAGE	5,000 - 7,499	13,462,254	10,573,989	12,555,103	36,591,346	6,108	6,098	6,086	6,098
COSTS $		626,349,861	457,602,853	401,482,563	1,485,435,277	284,188	263,900	194,611	247,531
WELLS		1,482	944	1,118	3,544				
FOOTAGE	7,500 - 9,999	12,797,988	8,134,418	9,617,183	30,549,589	8,636	8,617	8,602	8,620
COSTS $		861,976,290	585,917,728	557,400,580	2,005,294,598	581,630	620,676	498,569	565,828
WELLS		502	547	713	1,762				
FOOTAGE	10,000 - 12,499	5,547,091	6,085,678	7,920,655	19,553,424	11,050	11,126	11,109	11,097
COSTS $		629,212,732	724,750,726	776,646,937	2,130,610,395	1,253,412	1,324,956	1,089,266	1,209,200
WELLS		168	263	318	749				
FOOTAGE	12,500 - 14,999	2,248,190	3,566,894	4,325,349	10,140,433	13,382	13,562	13,602	13,539
COSTS $		336,714,102	607,861,391	606,590,601	1,551,166,094	2,004,251	2,311,260	1,907,518	2,070,983
WELLS		33	111	145	289				
FOOTAGE	15,000 - 17,499	518,457	1,766,400	2,309,050	4,593,907	15,711	15,914	15,924	15,896
COSTS $		106,206,347	434,244,545	503,295,878	1,043,746,770	3,218,374	3,912,113	3,471,006	3,611,581
WELLS		14	41	56	111				
FOOTAGE	17,500 - 19,999	260,355	741,672	1,023,221	2,025,248	18,597	18,090	18,272	18,245
COSTS $		70,285,934	217,561,127	256,760,154	544,607,215	5,020,424	5,306,369	4,585,003	4,906,372
WELLS		1	4	5	10				
FOOTAGE	20,000 & OVER	20,152	87,054	103,445	210,651	20,152	21,764	20,689	21,065
COSTS $		3,991,973	48,061,489	43,695,249	95,748,711	3,991,973	12,015,372	8,739,050	9,574,871
TOTAL WELLS		12,434	7,820	9,487	29,741				
TOTAL FOOTAGE		55,781,320	42,522,358	51,912,100	150,215,778	4,486	5,438	5,472	5,051
TOTAL COSTS $		3,474,161,292	3,599,504,833	3,475,856,013	10,549,522,138	279,408	460,295	366,381	354,713

* Includes the following states and areas which are not shown separately: Arizona, Georgia, Idaho, Iowa, Maryland, Missouri, Nevada, Oregon, South Carolina, South Dakota, Tennessee, Virginia, Washington, Offshore Federal Waters-Alaska, and Offshore Federal Waters-Pacific Coast.

ESTIMATED COSTS OF DRILLING AND EQUIPPING WELLS, BY DEPTH INTERVALS - 1988

TOTAL OFFSHORE *

Table 3

	DEPTH INTERVAL (FEET)	TOTAL NUMBER OF WELLS, FOOTAGE DRILLED, AND COSTS				AVERAGE DEPTH AND COST PER WELL			
		OIL WELLS	GAS WELLS	DRY HOLES	TOTAL	OIL	GAS	DRY	TOTAL
WELLS	0 - 1,249	--	--	--	--				
FOOTAGE		--	--	--	--	--	--	--	--
COSTS $		--	--	--	--	--	--	--	--
WELLS	1,250 - 2,499	--	--	1	1				
FOOTAGE		--	--	1,383	1,383	--	--	1,383	1,383
COSTS $		--	--	681,226	681,226	--	--	681,226	681,226
WELLS	2,500 - 3,749	1	2	10	13				
FOOTAGE		3,630	5,881	31,259	40,770	3,630	2,941	3,126	3,136
COSTS $		320,074	2,693,819	6,941,542	9,955,435	320,074	1,346,910	694,154	765,803
WELLS	3,750 - 4,999	6	3	15	24				
FOOTAGE		26,926	13,229	65,102	105,257	4,488	4,410	4,340	4,386
COSTS $		4,385,408	3,165,236	20,787,245	28,337,889	730,901	1,055,079	1,385,816	1,180,745
WELLS	5,000 - 7,499	22	16	52	90				
FOOTAGE		142,158	106,937	333,687	582,782	6,462	6,684	6,417	6,475
COSTS $		28,728,030	30,119,102	70,563,221	129,410,353	1,305,820	1,882,444	1,356,985	1,437,893
WELLS	7,500 - 9,999	64	51	118	233				
FOOTAGE		561,354	449,097	1,025,166	2,035,617	8,771	8,806	8,688	8,737
COSTS $		122,957,249	104,389,145	220,442,790	447,789,184	1,921,207	2,046,846	1,868,159	1,921,842
WELLS	10,000 - 12,499	56	49	147	252				
FOOTAGE		622,073	556,028	1,642,099	2,820,200	11,108	11,348	11,171	11,191
COSTS $		175,548,943	129,705,241	416,091,957	721,346,141	3,134,803	2,647,046	2,830,558	2,862,485
WELLS	12,500 - 14,999	22	47	88	157				
FOOTAGE		294,186	641,970	1,201,952	2,138,108	13,372	13,659	13,659	13,619
COSTS $		111,972,968	223,676,517	347,353,878	683,003,363	5,089,681	4,759,075	3,947,203	4,350,340
WELLS	15,000 - 17,499	6	20	41	67				
FOOTAGE		94,096	319,343	655,211	1,068,650	15,683	15,967	15,981	15,950
COSTS $		39,107,754	145,100,406	248,511,429	432,719,589	6,517,959	7,255,021	6,061,255	6,458,502
WELLS	17,500 - 19,999	5	4	17	26				
FOOTAGE		94,812	71,218	312,553	478,583	18,962	17,805	18,385	18,407
COSTS $		39,683,507	53,301,336	121,796,839	214,781,682	7,936,702	13,325,334	7,164,520	8,260,834
WELLS	20,000 & OVER	1	--	2	3				
FOOTAGE		20,152	--	42,945	63,097	20,152	--	21,473	21,032
COSTS $		3,991,973	--	22,610,256	26,602,229	3,991,973	--	11,305,128	8,867,410
TOTAL WELLS		183	192	491	866				
TOTAL FOOTAGE		1,859,387	2,163,703	5,311,357	9,334,447	10,161	11,269	10,817	10,779
TOTAL COSTS $		526,695,906	692,150,802	1,475,780,383	2,694,627,091	2,878,120	3,604,952	3,005,663	3,111,579

* Includes Offshore Federal Waters-Alaska, and Offshore Federal Waters-Pacific Coast, which are not shown separately.

ESTIMATED COSTS OF DRILLING AND EQUIPPING WELLS, BY DEPTH INTERVALS - 1988

TOTAL ONSHORE *

Table 4

	DEPTH INTERVAL (FEET)	TOTAL NUMBER OF WELLS, FOOTAGE DRILLED, AND COSTS				AVERAGE DEPTH AND COST PER WELL			
		OIL WELLS	GAS WELLS	DRY HOLES	TOTAL	OIL	GAS	DRY	TOTAL
WELLS		1,786	445	987	3,218				
FOOTAGE	0 - 1,249	1,523,198	367,677	750,307	2,641,182	853	826	760	821
COSTS $		70,462,695	12,284,021	13,503,719	96,250,435	39,453	27,605	13,682	29,910
WELLS		2,148	1,277	1,148	4,573				
FOOTAGE	1,250 - 2,499	3,817,421	2,354,055	2,107,788	8,279,264	1,777	1,843	1,836	1,810
COSTS $		172,194,247	112,383,817	46,570,063	331,148,127	80,165	88,006	40,566	72,414
WELLS		1,985	1,461	1,343	4,789				
FOOTAGE	2,500 - 3,749	6,246,673	4,540,195	4,266,589	15,053,457	3,147	3,108	3,177	3,143
COSTS $		255,767,082	233,686,798	94,358,584	583,812,464	128,850	159,950	70,260	121,907
WELLS		2,104	988	1,565	4,657				
FOOTAGE	3,750 - 4,999	9,308,985	4,285,216	6,835,666	20,429,867	4,424	4,337	4,368	4,387
COSTS $		336,294,547	159,291,283	147,141,672	642,727,502	159,836	161,226	94,020	138,013
WELLS		2,182	1,718	2,011	5,911				
FOOTAGE	5,000 - 7,499	13,320,096	10,467,052	12,221,416	36,008,564	6,105	6,093	6,077	6,092
COSTS $		597,621,831	427,483,751	330,919,342	1,356,024,924	273,887	248,826	164,555	229,407
WELLS		1,418	893	1,000	3,311				
FOOTAGE	7,500 - 9,999	12,236,634	7,685,321	8,592,017	28,513,972	8,630	8,606	8,592	8,612
COSTS $		739,019,041	481,528,583	336,957,790	1,557,505,414	521,170	539,226	336,958	470,403
WELLS		446	498	566	1,510				
FOOTAGE	10,000 - 12,499	4,925,018	5,529,650	6,278,556	16,733,224	11,043	11,104	11,093	11,082
COSTS $		453,663,789	595,045,485	360,554,980	1,409,264,254	1,017,183	1,194,871	637,023	933,288
WELLS		146	216	230	592				
FOOTAGE	12,500 - 14,999	1,954,004	2,924,924	3,123,397	8,002,325	13,384	13,541	13,580	13,517
COSTS $		224,741,134	384,184,874	259,236,723	868,162,731	1,539,323	1,778,634	1,127,116	1,466,491
WELLS		27	91	104	222				
FOOTAGE	15,000 - 17,499	424,361	1,447,057	1,653,839	3,525,257	15,717	15,902	15,902	15,880
COSTS $		67,098,593	289,144,139	254,784,449	611,027,181	2,485,133	3,177,408	2,449,851	2,752,375
WELLS		9	37	39	85				
FOOTAGE	17,500 - 19,999	165,543	670,454	710,668	1,546,665	18,394	18,120	18,222	18,196
COSTS $		30,602,427	164,259,791	134,963,315	329,825,533	3,400,270	4,439,454	3,460,598	3,880,301
WELLS		--	4	3	7				
FOOTAGE	20,000 & OVER	--	87,054	60,500	147,554	--	21,764	20,167	21,079
COSTS $		--	48,061,489	21,084,993	69,146,482	--	12,015,372	7,028,831	9,878,069
TOTAL WELLS		12,251	7,628	8,996	28,875				
TOTAL FOOTAGE		53,921,933	40,358,655	46,600,743	140,881,331	4,401	5,291	5,180	4,879
TOTAL COSTS $		2,947,465,386	2,907,354,031	2,000,075,630	7,854,895,047	240,590	381,142	222,329	272,031

* Includes the following states and areas which are not shown separately: Arizona, Georgia, Idaho, Iowa, Maryland, Missouri, Nevada, Oregon, South Carolina, South Dakota, Tennessee, Virginia, and Washington.

ESTIMATED COSTS OF DRILLING AND EQUIPPING WELLS, BY DEPTH INTERVALS - 1988

ALABAMA

Table 5

DEPTH INTERVAL (FEET)		TOTAL NUMBER OF WELLS, FOOTAGE DRILLED, AND COSTS				AVERAGE DEPTH AND COST PER WELL			
		OIL WELLS	GAS WELLS	DRY HOLES	TOTAL	OIL	GAS	DRY	TOTAL
WELLS		--	22	4	26				
FOOTAGE	0 - 1,249	--	24,040	1,362	25,402	--	1,093	341	977
COSTS $		--	1,608,427	72,363	1,680,790	--	73,110	18,091	64,646
WELLS		2	125	26	153				
FOOTAGE	1,250 - 2,499	4,633	218,290	50,810	273,733	2,317	1,746	1,954	1,789
COSTS $		240,480	12,386,237	1,501,795	14,128,512	120,240	99,090	57,761	92,343
WELLS		2	9	20	31				
FOOTAGE	2,500 - 3,749	5,898	27,392	58,041	91,331	2,949	3,044	2,902	2,946
COSTS $		289,715	1,498,138	1,604,891	3,392,744	144,858	166,460	80,245	109,443
WELLS		2	5	15	22				
FOOTAGE	3,750 - 4,999	9,720	23,889	67,993	101,602	4,860	4,778	4,533	4,618
COSTS $		373,862	1,132,521	1,568,294	3,074,677	186,931	226,504	104,553	139,758
WELLS		7	8	27	42				
FOOTAGE	5,000 - 7,499	45,037	44,809	154,402	244,248	6,434	5,601	5,719	5,815
COSTS $		1,586,800	2,335,183	5,028,880	8,950,863	226,686	291,898	186,255	213,116
WELLS		--	--	2	2				
FOOTAGE	7,500 - 9,999	--	--	17,802	17,802	--	--	8,901	8,901
COSTS $		--	--	966,218	966,218	--	--	483,109	483,109
WELLS		1	--	5	6				
FOOTAGE	10,000 - 12,499	12,435	--	56,600	69,035	12,435	--	11,320	11,506
COSTS $		763,544	--	1,786,171	2,549,715	763,544	--	357,234	424,953
WELLS		11	--	17	28				
FOOTAGE	12,500 - 14,999	155,780	--	228,137	383,917	14,162	--	13,420	13,711
COSTS $		11,624,532	--	8,395,208	20,019,740	1,056,776	--	493,836	714,991
WELLS		1	5	2	8				
FOOTAGE	15,000 - 17,499	17,212	78,571	32,801	128,584	17,212	15,714	16,401	16,073
COSTS $		2,794,265	8,994,574	2,251,631	14,040,470	2,794,265	1,798,915	1,125,816	1,755,059
WELLS		1	2	6	9				
FOOTAGE	17,500 - 19,999	18,490	37,195	109,676	165,361	18,490	18,598	18,279	18,373
COSTS $		1,860,464	6,026,279	7,710,629	15,597,372	1,860,464	3,013,140	1,285,105	1,733,041
WELLS		--	--	--	--				
FOOTAGE	20,000 & OVER	--	--	--	--	--	--	--	--
COSTS $		--	--	--	--	--	--	--	--
TOTAL WELLS		27	176	124	327				
TOTAL FOOTAGE		269,205	454,186	777,624	1,501,015	9,971	2,581	6,271	4,590
TOTAL COSTS $		19,533,662	33,981,359	30,886,080	84,401,101	723,469	193,076	249,081	258,107

ESTIMATED COSTS OF DRILLING AND EQUIPPING WELLS, BY DEPTH INTERVALS - 1988

ALASKA - TOTAL

Table 6

	DEPTH INTERVAL (FEET)	TOTAL NUMBER OF WELLS, FOOTAGE DRILLED, AND COSTS				AVERAGE DEPTH AND COST PER WELL			
		OIL WELLS	GAS WELLS	DRY HOLES	TOTAL	OIL	GAS	DRY	TOTAL
WELLS		--	--	--	--				
FOOTAGE	0 - 1,249	--	--	--	--	--	--	--	--
COSTS $		--	--	--	--	--	--	--	--
WELLS		--	1	--	1				
FOOTAGE	1,250 - 2,499	--	2,316	--	2,316	--	2,316	--	2,316
COSTS $		--	531,119	--	531,119	--	531,119	--	531,119
WELLS		--	1	--	1				
FOOTAGE	2,500 - 3,749	--	2,564	--	2,564	--	2,564	--	2,564
COSTS $		--	590,607	--	590,607	--	590,607	--	590,607
WELLS		--	--	--	--				
FOOTAGE	3,750 - 4,999	--	--	--	--	--	--	--	--
COSTS $		--	--	--	--	--	--	--	--
WELLS		6	--	--	6				
FOOTAGE	5,000 - 7,499	43,019	--	--	43,019	7,170	--	--	7,170
COSTS $		8,536,262	--	--	8,536,262	1,422,710	--	--	1,422,710
WELLS		41	--	1	42				
FOOTAGE	7,500 - 9,999	370,089	--	8,184	378,273	9,027	--	8,184	9,007
COSTS $		70,365,390	--	1,049,323	71,414,713	1,716,229	--	1,049,323	1,700,350
WELLS		60	--	1	61				
FOOTAGE	10,000 - 12,499	667,050	--	10,460	677,510	11,118	--	10,460	11,107
COSTS $		165,429,797	--	4,840,455	170,270,252	2,757,163	--	4,840,455	2,791,316
WELLS		12	--	1	13				
FOOTAGE	12,500 - 14,999	159,746	--	14,740	174,486	13,312	--	14,740	13,422
COSTS $		45,967,536	--	2,969,186	48,936,722	3,830,628	--	2,969,186	3,764,363
WELLS		4	1	1	6				
FOOTAGE	15,000 - 17,499	61,986	16,500	15,100	93,586	15,497	16,500	15,100	15,598
COSTS $		21,354,216	10,743,588	4,434,762	36,532,566	5,338,554	10,743,588	4,434,762	6,088,761
WELLS		--	--	--	--				
FOOTAGE	17,500 - 19,999	--	--	--	--	--	--	--	--
COSTS $		--	--	--	--	--	--	--	--
WELLS		--	--	--	--				
FOOTAGE	20,000 & OVER	--	--	--	--	--	--	--	--
COSTS $		--	--	--	--	--	--	--	--
TOTAL WELLS		123	3	4	130				
TOTAL FOOTAGE		1,301,890	21,380	48,484	1,371,754	10,584	7,127	12,121	10,552
TOTAL COSTS $		311,653,201	11,865,314	13,293,726	336,812,241	2,533,766	3,955,105	3,323,432	2,590,864

ESTIMATED COSTS OF DRILLING AND EQUIPPING WELLS, BY DEPTH INTERVALS - 1988

ALASKA - ONSHORE

Table 7

	DEPTH INTERVAL (FEET)	TOTAL NUMBER OF WELLS, FOOTAGE DRILLED, AND COSTS				AVERAGE DEPTH AND COST PER WELL			
		OIL WELLS	GAS WELLS	DRY HOLES	TOTAL	OIL	GAS	DRY	TOTAL
WELLS		--	--	--	--				
FOOTAGE	0 - 1,249	--	--	--	--	--	--	--	--
COSTS $		--	--	--	--	--	--	--	--
WELLS		--	1	--	1				
FOOTAGE	1,250 - 2,499	--	2,316	--	2,316	--	2,316	--	2,316
COSTS $		--	531,119	--	531,119	--	531,119	--	531,119
WELLS		--	1	--	1				
FOOTAGE	2,500 - 3,749	--	2,564	--	2,564	--	2,564	--	2,564
COSTS $		--	590,607	--	590,607	--	590,607	--	590,607
WELLS		--	--	--	--				
FOOTAGE	3,750 - 4,999	--	--	--	--	--	--	--	--
COSTS $		--	--	--	--	--	--	--	--
WELLS		6	--	--	6				
FOOTAGE	5,000 - 7,499	43,019	--	--	43,019	7,170	--	--	7,170
COSTS $		8,536,262	--	--	8,536,262	1,422,710	--	--	1,422,710
WELLS		41	--	1	42				
FOOTAGE	7,500 - 9,999	370,089	--	8,184	378,273	9,027	--	8,184	9,007
COSTS $		70,365,390	--	1,049,323	71,414,713	1,716,229	--	1,049,323	1,700,350
WELLS		55	--	1	56				
FOOTAGE	10,000 - 12,499	611,164	--	10,460	621,624	11,112	--	10,460	11,100
COSTS $		143,339,492	--	4,840,455	148,179,947	2,606,173	--	4,840,455	2,646,071
WELLS		12	--	1	13				
FOOTAGE	12,500 - 14,999	159,746	--	14,740	174,486	13,312	--	14,740	13,422
COSTS $		45,967,536	--	2,969,186	48,936,722	3,830,628	--	2,969,186	3,764,363
WELLS		4	1	1	6				
FOOTAGE	15,000 - 17,499	61,986	16,500	15,100	93,586	15,497	16,500	15,100	15,598
COSTS $		21,354,216	10,743,588	4,434,762	36,532,566	5,338,554	10,743,588	4,434,762	6,088,761
WELLS		--	--	--	--				
FOOTAGE	17,500 - 19,999	--	--	--	--	--	--	--	--
COSTS $		--	--	--	--	--	--	--	--
WELLS		--	--	--	--				
FOOTAGE	20,000 & OVER	--	--	--	--	--	--	--	--
COSTS $		--	--	--	--	--	--	--	--
TOTAL WELLS		118	3	4	125				
TOTAL FOOTAGE		1,246,004	21,380	48,484	1,315,868	10,559	7,127	12,121	10,527
TOTAL COSTS $		289,562,896	11,865,314	13,293,726	314,721,936	2,453,923	3,955,105	3,323,432	2,517,776

ESTIMATED COSTS OF DRILLING AND EQUIPPING WELLS, BY DEPTH INTERVALS - 1988

ALASKA - OFFSHORE

Table 8

	DEPTH INTERVAL (FEET)	TOTAL NUMBER OF WELLS, FOOTAGE DRILLED, AND COSTS				AVERAGE DEPTH AND COST PER WELL			
		OIL WELLS	GAS WELLS	DRY HOLES	TOTAL	OIL	GAS	DRY	TOTAL
WELLS		--	--	--	--				
FOOTAGE	0 - 1,249	--	--	--	--	--	--	--	--
COSTS $		--	--	--	--	--	--	--	--
WELLS		--	--	--	--				
FOOTAGE	1,250 - 2,499	--	--	--	--	--	--	--	--
COSTS $		--	--	--	--	--	--	--	--
WELLS		--	--	--	--				
FOOTAGE	2,500 - 3,749	--	--	--	--	--	--	--	--
COSTS $		--	--	--	--	--	--	--	--
WELLS		--	--	--	--				
FOOTAGE	3,750 - 4,999	--	--	--	--	--	--	--	--
COSTS $		--	--	--	--	--	--	--	--
WELLS		--	--	--	--				
FOOTAGE	5,000 - 7,499	--	--	--	--	--	--	--	--
COSTS $		--	--	--	--	--	--	--	--
WELLS		--	--	--	--				
FOOTAGE	7,500 - 9,999	--	--	--	--	--	--	--	--
COSTS $		--	--	--	--	--	--	--	--
WELLS		5	--	--	5				
FOOTAGE	10,000 - 12,499	55,886	--	--	55,886	11,177	--	--	11,177
COSTS $		22,090,305	--	--	22,090,305	4,418,061	--	--	4,418,061
WELLS		--	--	--	--				
FOOTAGE	12,500 - 14,999	--	--	--	--	--	--	--	--
COSTS $		--	--	--	--	--	--	--	--
WELLS		--	--	--	--				
FOOTAGE	15,000 - 17,499	--	--	--	--	--	--	--	--
COSTS $		--	--	--	--	--	--	--	--
WELLS		--	--	--	--				
FOOTAGE	17,500 - 19,999	--	--	--	--	--	--	--	--
COSTS $		--	--	--	--	--	--	--	--
WELLS		--	--	--	--				
FOOTAGE	20,000 & OVER	--	--	--	--	--	--	--	--
COSTS $		--	--	--	--	--	--	--	--
TOTAL WELLS		5	--	--	5				
TOTAL FOOTAGE		55,886	--	--	55,886	11,177	--	--	11,177
TOTAL COSTS $		22,090,305	--	--	22,090,305	4,418,061	--	--	4,418,061

ESTIMATED COSTS OF DRILLING AND EQUIPPING WELLS, BY DEPTH INTERVALS - 1988

ARKANSAS

Table 9

	DEPTH INTERVAL (FEET)	TOTAL NUMBER OF WELLS, FOOTAGE DRILLED, AND COSTS				AVERAGE DEPTH AND COST PER WELL			
		OIL WELLS	GAS WELLS	DRY HOLES	TOTAL	OIL	GAS	DRY	TOTAL
WELLS		1	23	18	42				
FOOTAGE	0 - 1,249	1,190	22,196	13,058	36,444	1,190	965	725	868
COSTS $		28,108	1,355,152	283,602	1,666,862	28,108	58,920	15,756	39,687
WELLS		4	39	24	67				
FOOTAGE	1,250 - 2,499	7,732	78,079	41,176	126,987	1,933	2,002	1,716	1,895
COSTS $		202,724	4,979,084	1,179,406	6,361,214	50,681	127,669	49,142	94,943
WELLS		8	16	54	78				
FOOTAGE	2,500 - 3,749	23,898	45,650	169,816	239,364	2,987	2,853	3,145	3,069
COSTS $		684,754	3,935,867	4,265,230	8,885,851	85,594	245,992	78,986	113,921
WELLS		12	29	27	68				
FOOTAGE	3,750 - 4,999	52,076	129,537	116,632	298,245	4,340	4,467	4,320	4,386
COSTS $		1,711,181	8,645,315	2,807,764	13,164,260	142,598	298,114	103,991	193,592
WELLS		13	77	57	147				
FOOTAGE	5,000 - 7,499	90,876	458,716	345,511	895,103	6,990	5,957	6,062	6,089
COSTS $		3,528,101	32,521,742	10,070,881	46,120,724	271,392	422,360	176,682	313,746
WELLS		6	4	10	20				
FOOTAGE	7,500 - 9,999	49,790	33,354	86,111	169,255	8,298	8,339	8,611	8,463
COSTS $		2,603,438	2,434,361	3,804,285	8,842,084	433,906	608,590	380,429	442,104
WELLS		--	1	3	4				
FOOTAGE	10,000 - 12,499	--	11,159	33,432	44,591	--	11,159	11,144	11,148
COSTS $		--	836,198	1,178,589	2,014,787	--	836,198	392,863	503,697
WELLS		--	--	--	--				
FOOTAGE	12,500 - 14,999	--	--	--	--	--	--	--	--
COSTS $		--	--	--	--	--	--	--	--
WELLS		--	--	--	--				
FOOTAGE	15,000 - 17,499	--	--	--	--	--	--	--	--
COSTS $		--	--	--	--	--	--	--	--
WELLS		--	--	--	--				
FOOTAGE	17,500 - 19,999	--	--	--	--	--	--	--	--
COSTS $		--	--	--	--	--	--	--	--
WELLS		--	--	--	--				
FOOTAGE	20,000 & OVER	--	--	--	--	--	--	--	--
COSTS $		--	--	--	--	--	--	--	--
TOTAL WELLS		44	189	193	426				
TOTAL FOOTAGE		225,562	778,691	805,736	1,809,989	5,126	4,120	4,175	4,249
TOTAL COSTS $		8,758,306	54,707,719	23,589,757	87,055,782	199,052	289,459	122,227	204,356

ESTIMATED COSTS OF DRILLING AND EQUIPPING WELLS, BY DEPTH INTERVALS - 1988

CALIFORNIA - TOTAL

Table 10

DEPTH INTERVAL (FEET)		TOTAL NUMBER OF WELLS, FOOTAGE DRILLED, AND COSTS				AVERAGE DEPTH AND COST PER WELL			
		OIL WELLS	GAS WELLS	DRY HOLES	TOTAL	OIL	GAS	DRY	TOTAL
WELLS		610	--	9	619				
FOOTAGE	0 - 1,249	552,390	--	8,509	560,899	906	--	945	906
COSTS $		40,340,932	--	460,914	40,801,846	66,133	--	51,213	65,916
WELLS		547	3	12	562				
FOOTAGE	1,250 - 2,499	909,810	5,662	21,333	936,805	1,663	1,887	1,778	1,667
COSTS $		67,741,019	472,347	1,405,967	69,619,333	123,841	157,449	117,164	123,878
WELLS		169	5	13	187				
FOOTAGE	2,500 - 3,749	510,816	17,213	41,629	569,658	3,023	3,443	3,202	3,046
COSTS $		46,347,650	1,184,199	1,948,519	49,480,368	274,246	236,840	149,886	264,601
WELLS		48	18	14	80				
FOOTAGE	3,750 - 4,999	208,088	77,444	59,234	344,766	4,335	4,302	4,231	4,310
COSTS $		18,097,955	5,032,247	2,465,282	25,595,484	377,041	279,569	176,092	319,944
WELLS		35	38	48	121				
FOOTAGE	5,000 - 7,499	215,931	236,894	294,607	747,432	6,169	6,234	6,138	6,177
COSTS $		21,931,999	14,574,429	13,074,958	49,581,386	626,629	383,538	272,395	409,764
WELLS		35	22	41	98				
FOOTAGE	7,500 - 9,999	291,821	183,738	345,072	820,631	8,338	8,352	8,416	8,374
COSTS $		46,654,710	14,263,091	17,563,711	78,481,512	1,332,992	648,322	428,383	800,832
WELLS		11	4	23	38				
FOOTAGE	10,000 - 12,499	118,592	40,962	251,736	411,290	10,781	10,241	10,945	10,823
COSTS $		28,868,708	2,662,604	29,070,317	60,601,629	2,624,428	665,651	1,263,927	1,594,780
WELLS		4	--	6	10				
FOOTAGE	12,500 - 14,999	52,328	--	81,855	134,183	13,082	--	13,643	13,418
COSTS $		17,193,337	--	8,849,690	26,043,027	4,298,335	--	1,474,948	2,604,303
WELLS		1	--	2	3				
FOOTAGE	15,000 - 17,499	15,739	--	32,100	47,839	15,739	--	16,050	15,946
COSTS $		6,531,660	--	6,115,099	12,646,759	6,531,660	--	3,057,550	4,215,587
WELLS		1	--	--	1				
FOOTAGE	17,500 - 19,999	19,014	--	--	19,014	19,014	--	--	19,014
COSTS $		7,667,477	--	--	7,667,477	7,667,477	--	--	7,667,477
WELLS		--	--	--	--				
FOOTAGE	20,000 & OVER	--	--	--	--	--	--	--	--
COSTS $		--	--	--	--	--	--	--	--
TOTAL WELLS		1,461	90	168	1,719				
TOTAL FOOTAGE		2,894,529	561,913	1,136,075	4,592,517	1,981	6,243	6,762	2,672
TOTAL COSTS $		301,375,447	38,188,917	80,954,457	420,518,821	206,280	424,321	481,872	244,630

ESTIMATED COSTS OF DRILLING AND EQUIPPING WELLS, BY DEPTH INTERVALS - 1988

CALIFORNIA - NORTH

Table 11

	DEPTH INTERVAL (FEET)	TOTAL NUMBER OF WELLS, FOOTAGE DRILLED, AND COSTS				AVERAGE DEPTH AND COST PER WELL			
		OIL WELLS	GAS WELLS	DRY HOLES	TOTAL	OIL	GAS	DRY	TOTAL
WELLS	0 - 1,249	--	--	--	--				
FOOTAGE		--	--	--	--	--	--	--	--
COSTS $		--	--	--	--	--	--	--	--
WELLS	1,250 - 2,499	--	2	1	3				
FOOTAGE		--	3,600	2,000	5,600	--	1,800	2,000	1,867
COSTS $		--	207,326	90,040	297,366	--	103,663	90,040	99,122
WELLS	2,500 - 3,749	--	5	8	13				
FOOTAGE		--	17,213	26,181	43,394	--	3,443	3,273	3,338
COSTS $	—	--	1,184,199	909,863	2,094,062	--	236,840	113,733	161,082
WELLS	3,750 - 4,999	1	18	9	28				
FOOTAGE		4,249	77,444	37,758	119,451	4,249	4,302	4,195	4,266
COSTS $		288,932	5,032,247	1,124,370	6,445,549	288,932	279,569	124,930	230,198
WELLS	5,000 - 7,499	1	33	38	72				
FOOTAGE		7,490	206,267	228,990	442,747	7,490	6,251	6,026	6,149
COSTS $		326,500	12,181,348	8,092,928	20,600,776	326,500	369,132	212,972	286,122
WELLS	7,500 - 9,999	--	20	33	53				
FOOTAGE		--	167,088	279,286	446,374	--	8,354	8,463	8,422
COSTS $		--	10,753,777	12,650,445	23,404,222	--	537,689	383,347	441,589
WELLS	10,000 - 12,499	--	4	9	13				
FOOTAGE		--	40,962	94,284	135,246	--	10,241	10,476	10,404
COSTS $		--	2,662,604	4,661,531	7,324,135	--	665,651	517,948	563,395
WELLS	12,500 - 14,999	--	--	--	--				
FOOTAGE		--	--	--	--	--	--	--	--
COSTS $		--	--	--	--	--	--	--	--
WELLS	15,000 - 17,499	--	--	--	--				
FOOTAGE		--	--	--	--	--	--	--	--
COSTS $		--	--	--	--	--	--	--	--
WELLS	17,500 - 19,999	--	--	--	--				
FOOTAGE		--	--	--	--	--	--	--	--
COSTS $		--	--	--	--	--	--	--	--
WELLS	20,000 & OVER	--	--	--	--				
FOOTAGE		--	--	--	--	--	--	--	--
COSTS $		--	--	--	--	--	--	--	--
TOTAL WELLS		2	82	98	182				
TOTAL FOOTAGE		11,739	512,574	668,499	1,192,812	5,870	6,251	6,821	6,554
TOTAL COSTS $		615,432	32,021,501	27,529,177	60,166,110	307,716	390,506	280,910	330,583

ESTIMATED COSTS OF DRILLING AND EQUIPPING WELLS, BY DEPTH INTERVALS - 1988

CALIFORNIA -CENTRAL COASTAL

Table 12

	DEPTH INTERVAL (FEET)	TOTAL NUMBER OF WELLS, FOOTAGE DRILLED, AND COSTS				AVERAGE DEPTH AND COST PER WELL			
		OIL WELLS	GAS WELLS	DRY HOLES	TOTAL	OIL	GAS	DRY	TOTAL
WELLS		--	--	--	--				
FOOTAGE	0 - 1,249	--	--	--	--	--	--	--	--
COSTS $		--	--	--	--	--	--	--	--
WELLS		40	--	1	41				
FOOTAGE	1,250 - 2,499	76,290	--	2,000	78,290	1,907	--	2,000	1,910
COSTS $		6,283,036	--	178,438	6,461,474	157,076	--	178,438	157,597
WELLS		14	--	2	16				
FOOTAGE	2,500 - 3,749	41,543	--	6,368	47,911	2,967	--	3,184	2,994
COSTS $		4,740,039	--	545,780	5,285,819	338,574	--	272,890	330,364
WELLS		7	--	--	7				
FOOTAGE	3,750 - 4,999	33,193	--	--	33,193	4,742	--	--	4,742
COSTS $		2,288,036	--	--	2,288,036	326,862	--	--	326,862
WELLS		8	--	7	15				
FOOTAGE	5,000 - 7,499	47,784	--	48,232	96,016	5,973	--	6,890	6,401
COSTS $		4,786,865	--	3,776,158	8,563,023	598,358	--	539,451	570,868
WELLS		6	--	4	10				
FOOTAGE	7,500 - 9,999	47,739	--	33,186	80,925	7,957	--	8,297	8,093
COSTS $		5,342,449	--	2,276,601	7,619,050	890,408	--	569,150	761,905
WELLS		--	--	--	--				
FOOTAGE	10,000 - 12,499	--	--	--	--	--	--	--	--
COSTS $		--	--	--	--	--	--	--	--
WELLS		--	--	--	--				
FOOTAGE	12,500 - 14,999	--	--	--	--	--	--	--	--
COSTS $		--	--	--	--	--	--	--	--
WELLS		--	--	--	--				
FOOTAGE	15,000 - 17,499	--	--	--	--	--	--	--	--
COSTS $		--	--	--	--	--	--	--	--
WELLS		--	--	--	--				
FOOTAGE	17,500 - 19,999	--	--	--	--	--	--	--	--
COSTS $		--	--	--	--	--	--	--	--
WELLS		--	--	--	--				
FOOTAGE	20,000 & OVER	--	--	--	--	--	--	--	--
COSTS $		--	--	--	--	--	--	--	--
TOTAL WELLS		75	--	14	89				
TOTAL FOOTAGE		246,549	--	89,786	336,335	3,287	--	6,413	3,779
TOTAL COSTS $		23,440,425	--	6,776,977	30,217,402	312,539	--	484,070	339,521

ESTIMATED COSTS OF DRILLING AND EQUIPPING WELLS, BY DEPTH INTERVALS - 1988

Table 13

CALIFORNIA - EAST CENTRAL

DEPTH INTERVAL (FEET)		TOTAL NUMBER OF WELLS, FOOTAGE DRILLED, AND COSTS				AVERAGE DEPTH AND COST PER WELL			
		OIL WELLS	GAS WELLS	DRY HOLES	TOTAL	OIL	GAS	DRY	TOTAL
WELLS		610	--	9	619				
FOOTAGE	0 - 1,249	552,390	--	8,509	560,899	906	--	945	906
COSTS $		40,340,932	--	460,914	40,801,846	66,133	--	51,213	65,916
WELLS		485	1	10	496				
FOOTAGE	1,250 - 2,499	796,567	2,062	17,333	815,962	1,642	2,062	1,733	1,645
COSTS $		54,603,164	265,021	1,137,489	56,005,674	112,584	265,021	113,749	112,915
WELLS		124	--	3	127				
FOOTAGE	2,500 - 3,749	379,402	--	9,080	388,482	3,060	--	3,027	3,059
COSTS $		26,525,542	--	492,876	27,018,418	213,916	--	164,292	212,743
WELLS		33	--	4	37				
FOOTAGE	3,750 - 4,999	138,782	--	16,959	155,741	4,206	--	4,240	4,209
COSTS $		11,346,266	--	839,525	12,185,791	343,826	--	209,881	329,346
WELLS		18	5	2	25				
FOOTAGE	5,000 - 7,499	112,024	30,627	11,379	154,030	6,224	6,125	5,690	6,161
COSTS $		10,886,084	2,393,081	731,398	14,010,563	604,782	478,616	365,699	560,423
WELLS		16	1	4	21				
FOOTAGE	7,500 - 9,999	130,243	8,000	32,600	170,843	8,140	8,000	8,150	8,135
COSTS $		12,112,568	478,401	2,636,665	15,227,634	757,036	478,401	659,166	725,125
WELLS		4	--	12	16				
FOOTAGE	10,000 - 12,499	44,528	--	135,659	180,187	11,132	--	11,305	11,262
COSTS $		5,204,241	--	11,165,833	16,370,074	1,301,060	--	930,486	1,023,130
WELLS		1	--	6	7				
FOOTAGE	12,500 - 14,999	13,466	--	81,855	95,321	13,466	--	13,643	13,617
COSTS $		718,954	--	8,849,690	9,568,644	718,954	--	1,474,948	1,366,949
WELLS		--	--	2	2				
FOOTAGE	15,000 - 17,499	--	--	32,100	32,100	--	--	16,050	16,050
COSTS $		--	--	6,115,099	6,115,099	--	--	3,057,550	3,057,550
WELLS		--	--	--	--				
FOOTAGE	17,500 - 19,999	--	--	--	--	--	--	--	--
COSTS $		--	--	--	--	--	--	--	--
WELLS		--	--	--	--				
FOOTAGE	20,000 & OVER	--	--	--	--	--	--	--	--
COSTS $		--	--	--	--	--	--	--	--
TOTAL WELLS		1,291	7	52	1,350				
TOTAL FOOTAGE		2,167,402	40,689	345,474	2,553,565	1,679	5,813	6,644	1,892
TOTAL COSTS $		161,737,751	3,136,503	32,429,489	197,303,743	125,281	448,072	623,644	146,151

ESTIMATED COSTS OF DRILLING AND EQUIPPING WELLS, BY DEPTH INTERVALS - 1988

CALIFORNIA - SOUTH

Table 14

DEPTH INTERVAL (FEET)		TOTAL NUMBER OF WELLS, FOOTAGE DRILLED, AND COSTS				AVERAGE DEPTH AND COST PER WELL			
		OIL WELLS	GAS WELLS	DRY HOLES	TOTAL	OIL	GAS	DRY	TOTAL
WELLS		--	--	--	--				
FOOTAGE	0 - 1,249	--	--	--	--	--	--	--	--
COSTS $		--	--	--	--	--	--	--	--
WELLS		22	--	--	22				
FOOTAGE	1,250 - 2,499	36,953	--	--	36,953	1,680	--	--	1,680
COSTS $		6,854,819	--	--	6,854,819	311,583	--	--	311,583
WELLS		30	--	--	30				
FOOTAGE	2,500 - 3,749	86,241	--	--	86,241	2,875	--	--	2,875
COSTS $		14,761,995	--	--	14,761,995	492,067	--	--	492,067
WELLS		2	--	1	3				
FOOTAGE	3,750 - 4,999	9,243	--	4,517	13,760	4,622	--	4,517	4,587
COSTS $		1,320,647	--	501,387	1,822,034	660,324	--	501,387	607,345
WELLS		6	--	1	7				
FOOTAGE	5,000 - 7,499	35,691	--	6,006	41,697	5,949	--	6,006	5,957
COSTS $		4,348,698	--	474,474	4,823,172	724,783	--	474,474	689,025
WELLS		2	--	--	2				
FOOTAGE	7,500 - 9,999	16,100	--	--	16,100	8,050	--	--	8,050
COSTS $		1,613,708	--	--	1,613,708	806,854	--	--	806,854
WELLS		--	--	--	--				
FOOTAGE	10,000 - 12,499	--	--	--	--	--	--	--	--
COSTS $		--	--	--	--	--	--	--	--
WELLS		--	--	--	--				
FOOTAGE	12,500 - 14,999	--	--	--	--	--	--	--	--
COSTS $		--	--	--	--	--	--	--	--
WELLS		--	--	--	--				
FOOTAGE	15,000 - 17,499	--	--	--	--	--	--	--	--
COSTS $		--	--	--	--	--	--	--	--
WELLS		--	--	--	--				
FOOTAGE	17,500 - 19,999	--	--	--	--	--	--	--	--
COSTS $		--	--	--	--	--	--	--	--
WELLS		--	--	--	--				
FOOTAGE	20,000 & OVER	--	--	--	--	--	--	--	--
COSTS $		--	--	--	--	--	--	--	--
TOTAL WELLS		62	--	2	64				
TOTAL FOOTAGE		184,228	--	10,523	194,751	2,971	--	5,262	3,043
TOTAL COSTS $		28,899,867	--	975,861	29,875,728	466,127	--	487,931	466,808

ESTIMATED COSTS OF DRILLING AND EQUIPPING WELLS, BY DEPTH INTERVALS - 1988

CALIFORNIA - OFFSHORE

Table 15

	DEPTH INTERVAL (FEET)	TOTAL NUMBER OF WELLS, FOOTAGE DRILLED, AND COSTS				AVERAGE DEPTH AND COST PER WELL			
		OIL WELLS	GAS WELLS	DRY HOLES	TOTAL	OIL	GAS	DRY	TOTAL
WELLS		--	--	--	--				
FOOTAGE	0 - 1,249	--	--	--	--	--	--	--	--
COSTS $		--	--	--	--	--	--	--	--
WELLS		--	--	--	--				
FOOTAGE	1,250 - 2,499	--	--	--	--	--	--	--	--
COSTS $		--	--	--	--	--	--	--	--
WELLS		1	--	--	1				
FOOTAGE	2,500 - 3,749	3,630	--	--	3,630	3,630	--	--	3,630
COSTS $		320,074	--	--	320,074	320,074	--	--	320,074
WELLS		5	--	--	5				
FOOTAGE	3,750 - 4,999	22,621	--	--	22,621	4,524	--	--	4,524
COSTS $		2,854,074	--	--	2,854,074	570,815	--	--	570,815
WELLS		2	--	--	2				
FOOTAGE	5,000 - 7,499	12,942	--	--	12,942	6,471	--	--	6,471
COSTS $		1,583,852	--	--	1,583,852	791,926	--	--	791,926
WELLS		11	1	--	12				
FOOTAGE	7,500 - 9,999	97,739	8,650	--	106,389	8,885	8,650	--	8,866
COSTS $		27,585,985	3,030,913	--	30,616,898	2,507,817	3,030,913	--	2,551,408
WELLS		7	--	2	9				
FOOTAGE	10,000 - 12,499	74,064	--	21,793	95,857	10,581	--	10,897	10,651
COSTS $		23,664,467	--	13,242,953	36,907,420	3,380,638	--	6,621,477	4,100,825
WELLS		3	--	--	3				
FOOTAGE	12,500 - 14,999	38,862	--	--	38,862	12,954	--	--	12,954
COSTS $		16,474,383	--	--	16,474,383	5,491,461	--	--	5,491,461
WELLS		1	--	--	1				
FOOTAGE	15,000 - 17,499	15,739	--	--	15,739	15,739	--	--	15,739
COSTS $		6,531,660	--	--	6,531,660	6,531,660	--	--	6,531,660
WELLS		1	--	--	1				
FOOTAGE	17,500 - 19,999	19,014	--	--	19,014	19,014	--	--	19,014
COSTS $		7,667,477	--	--	7,667,477	7,667,477	--	--	7,667,477
WELLS		--	--	--	--				
FOOTAGE	20,000 & OVER	--	--	--	--	--	--	--	--
COSTS $		--	--	--	--	--	--	--	--
TOTAL WELLS		31	1	2	34				
TOTAL FOOTAGE		284,611	8,650	21,793	315,054	9,181	8,650	10,897	9,266
TOTAL COSTS $		86,681,972	3,030,913	13,242,953	102,955,838	2,796,193	3,030,913	6,621,477	3,028,113

ESTIMATED COSTS OF DRILLING AND EQUIPPING WELLS, BY DEPTH INTERVALS - 1988

COLORADO

Table 16

DEPTH INTERVAL (FEET)		TOTAL NUMBER OF WELLS, FOOTAGE DRILLED, AND COSTS				AVERAGE DEPTH AND COST PER WELL			
		OIL WELLS	GAS WELLS	DRY HOLES	TOTAL	OIL	GAS	DRY	TOTAL
WELLS		3	2	5	10				
FOOTAGE	0 - 1,249	2,653	1,561	3,459	7,673	884	781	692	767
COSTS $		247,629	89,440	224,192	561,261	82,543	44,720	44,838	56,126
WELLS		2	78	11	91				
FOOTAGE	1,250 - 2,499	4,518	162,916	21,445	188,879	2,259	2,089	1,950	2,076
COSTS $		359,060	18,000,449	712,156	19,071,665	179,530	230,775	64,741	209,579
WELLS		7	112	11	130				
FOOTAGE	2,500 - 3,749	24,797	335,279	33,823	393,899	3,542	2,994	3,075	3,030
COSTS $		1,160,745	28,024,262	1,039,764	30,224,771	165,821	250,217	94,524	232,498
WELLS		11	16	41	68				
FOOTAGE	3,750 - 4,999	51,776	70,399	190,547	312,722	4,707	4,400	4,647	4,599
COSTS $		1,699,890	4,181,848	5,945,884	11,827,622	154,535	261,366	145,022	173,936
WELLS		191	243	241	675				
FOOTAGE	5,000 - 7,499	1,153,681	1,688,174	1,406,613	4,248,468	6,040	6,947	5,837	6,294
COSTS $		42,454,953	57,158,666	29,504,689	129,118,308	222,277	235,221	122,426	191,286
WELLS		13	54	22	89				
FOOTAGE	7,500 - 9,999	104,098	434,983	176,664	715,745	8,008	8,055	8,030	8,042
COSTS $		3,869,114	14,797,112	3,234,173	21,900,399	297,624	274,021	147,008	246,072
WELLS		--	1	3	4				
FOOTAGE	10,000 - 12,499	--	11,500	34,854	46,354	--	11,500	11,618	11,589
COSTS $		--	421,040	4,981,585	5,402,625	--	421,040	1,660,528	1,350,656
WELLS		--	--	1	1				
FOOTAGE	12,500 - 14,999	--	--	13,600	13,600	--	--	13,600	13,600
COSTS $		--	--	643,265	643,265	--	--	643,265	643,265
WELLS		--	--	1	1				
FOOTAGE	15,000 - 17,499	--	--	15,300	15,300	--	--	15,300	15,300
COSTS $		--	--	4,729,993	4,729,993	--	--	4,729,993	4,729,993
WELLS		--	--	--	--				
FOOTAGE	17,500 - 19,999	--	--	--	--	--	--	--	--
COSTS $		--	--	--	--	--	--	--	--
WELLS		--	--	--	--				
FOOTAGE	20,000 & OVER	--	--	--	--	--	--	--	--
COSTS $		--	--	--	--	--	--	--	--
TOTAL WELLS		227	506	336	1,069				
TOTAL FOOTAGE		1,341,523	2,704,812	1,896,305	5,942,640	5,910	5,345	5,644	5,559
TOTAL COSTS $		49,791,391	122,672,817	51,015,701	223,479,909	219,345	242,436	151,832	209,055

ESTIMATED COSTS OF DRILLING AND EQUIPPING WELLS, BY DEPTH INTERVALS - 1988

Table 17

FLORIDA

DEPTH INTERVAL (FEET)		TOTAL NUMBER OF WELLS, FOOTAGE DRILLED, AND COSTS				AVERAGE DEPTH AND COST PER WELL			
		OIL WELLS	GAS WELLS	DRY HOLES	TOTAL	OIL	GAS	DRY	TOTAL
0 - 1,249	WELLS	--	--	--	--				
	FOOTAGE	--	--	--	--	--	--	--	--
	COSTS $	--	--	--	--	--	--	--	--
1,250 - 2,499	WELLS	--	--	--	--				
	FOOTAGE	--	--	--	--	--	--	--	--
	COSTS $	--	--	--	--	--	--	--	--
2,500 - 3,749	WELLS	--	--	--	--				
	FOOTAGE	--	--	--	--	--	--	--	--
	COSTS $	--	--	--	--	--	--	--	--
3,750 - 4,999	WELLS	--	--	--	--				
	FOOTAGE	--	--	--	--	--	--	--	--
	COSTS $	--	--	--	--	--	--	--	--
5,000 - 7,499	WELLS	--	--	--	--				
	FOOTAGE	--	--	--	--	--	--	--	--
	COSTS $	--	--	--	--	--	--	--	--
7,500 - 9,999	WELLS	--	--	1	1				
	FOOTAGE	--	--	9,758	9,758	--	--	9,758	9,758
	COSTS $	--	--	518,538	518,538	--	--	518,538	518,538
10,000 - 12,499	WELLS	1	--	5	6				
	FOOTAGE	11,800	--	59,802	71,602	11,800	--	11,960	11,934
	COSTS $	2,702,468	--	6,730,500	9,432,968	2,702,468	--	1,346,100	1,572,161
12,500 - 14,999	WELLS	--	--	--	--				
	FOOTAGE	--	--	--	--	--	--	--	--
	COSTS $	--	--	--	--	--	--	--	--
15,000 - 17,499	WELLS	1	--	2	3				
	FOOTAGE	16,810	--	33,342	50,152	16,810	--	16,671	16,717
	COSTS $	1,229,614	--	3,815,363	5,044,977	1,229,614	--	1,907,682	1,681,659
17,500 - 19,999	WELLS	--	--	--	--				
	FOOTAGE	--	--	--	--	--	--	--	--
	COSTS $	--	--	--	--	--	--	--	--
20,000 & OVER	WELLS	--	--	--	--				
	FOOTAGE	--	--	--	--	--	--	--	--
	COSTS $	--	--	--	--	--	--	--	--
TOTAL WELLS		2	--	8	10				
TOTAL FOOTAGE		28,610	--	102,902	131,512	14,305	--	12,863	13,151
TOTAL COSTS $		3,932,082	--	11,064,401	14,996,483	1,966,041	--	1,383,050	1,499,648

ESTIMATED COSTS OF DRILLING AND EQUIPPING WELLS, BY DEPTH INTERVALS - 1988

ILLINOIS

Table 18

	DEPTH INTERVAL (FEET)	TOTAL NUMBER OF WELLS, FOOTAGE DRILLED, AND COSTS				AVERAGE DEPTH AND COST PER WELL			
		OIL WELLS	GAS WELLS	DRY HOLES	TOTAL	OIL	GAS	DRY	TOTAL
WELLS		173	33	167	373				
FOOTAGE	0 - 1,249	150,143	15,906	102,250	268,299	868	482	612	719
COSTS $		7,179,488	704,095	1,746,842	9,630,425	41,500	21,336	10,460	25,819
WELLS		136	--	63	199				
FOOTAGE	1,250 - 2,499	241,930	--	122,816	364,746	1,779	--	1,949	1,833
COSTS $		9,523,783	--	2,198,381	11,722,164	70,028	--	34,895	58,905
WELLS		172	1	158	331				
FOOTAGE	2,500 - 3,749	533,289	2,685	493,262	1,029,236	3,101	2,685	3,122	3,109
COSTS $		15,247,737	50,538	7,388,369	22,686,644	88,650	50,538	46,762	68,540
WELLS		39	--	24	63				
FOOTAGE	3,750 - 4,999	151,569	--	98,191	249,760	3,886	--	4,091	3,964
COSTS $		5,725,903	--	1,566,091	7,291,994	146,818	--	65,254	115,746
WELLS		2	--	4	6				
FOOTAGE	5,000 - 7,499	10,191	--	21,824	32,015	5,096	--	5,456	5,336
COSTS $		437,295	--	482,564	919,859	218,648	--	120,641	153,310
WELLS		--	--	--	--				
FOOTAGE	7,500 - 9,999	--	--	--	--	--	--	--	--
COSTS $		--	--	--	--	--	--	--	--
WELLS		--	--	--	--				
FOOTAGE	10,000 - 12,499	--	--	--	--	--	--	--	--
COSTS $		--	--	--	--	--	--	--	--
WELLS		--	--	--	--				
FOOTAGE	12,500 - 14,999	--	--	--	--	--	--	--	--
COSTS $		--	--	--	--	--	--	--	--
WELLS		--	--	--	--				
FOOTAGE	15,000 - 17,499	--	--	--	--	--	--	--	--
COSTS $		--	--	--	--	--	--	--	--
WELLS		--	--	--	--				
FOOTAGE	17,500 - 19,999	--	--	--	--	--	--	--	--
COSTS $		--	--	--	--	--	--	--	--
WELLS		--	--	--	--				
FOOTAGE	20,000 & OVER	--	--	--	--	--	--	--	--
COSTS $		--	--	--	--	--	--	--	--
TOTAL WELLS		522	34	416	972				
TOTAL FOOTAGE		1,087,122	18,591	838,343	1,944,056	2,083	547	2,015	2,000
TOTAL COSTS $		38,114,206	754,633	13,382,247	52,251,086	73,016	22,195	32,169	53,756

ESTIMATED COSTS OF DRILLING AND EQUIPPING WELLS, BY DEPTH INTERVALS - 1988

INDIANA

Table 19

DEPTH INTERVAL (FEET)		TOTAL NUMBER OF WELLS, FOOTAGE DRILLED, AND COSTS				AVERAGE DEPTH AND COST PER WELL			
		OIL WELLS	GAS WELLS	DRY HOLES	TOTAL	OIL	GAS	DRY	TOTAL
WELLS		38	13	47	98				
FOOTAGE	0 - 1,249	34,065	10,935	39,436	84,436	896	841	839	862
COSTS $		967,170	244,427	789,195	2,000,792	25,452	18,802	16,791	20,416
WELLS		36	8	52	96				
FOOTAGE	1,250 - 2,499	61,127	16,766	92,532	170,425	1,698	2,096	1,779	1,775
COSTS $		1,491,671	325,941	1,386,262	3,203,874	41,435	40,743	26,659	33,374
WELLS		7	--	14	21				
FOOTAGE	2,500 - 3,749	19,802	--	40,958	60,760	2,829	--	2,926	2,893
COSTS $		471,355	--	545,201	1,016,556	67,336	--	38,943	48,407
WELLS		--	--	--	--				
FOOTAGE	3,750 - 4,999	--	--	--	--	--	--	--	--
COSTS $		--	--	--	--	--	--	--	--
WELLS		--	--	--	--				
FOOTAGE	5,000 - 7,499	--	--	--	--	--	--	--	--
COSTS $		--	--	--	--	--	--	--	--
WELLS		--	--	--	--				
FOOTAGE	7,500 - 9,999	--	--	--	--	--	--	--	--
COSTS $		--	--	--	--	--	--	--	--
WELLS		--	--	--	--				
FOOTAGE	10,000 - 12,499	--	--	--	--	--	--	--	--
COSTS $		--	--	--	--	--	--	--	--
WELLS		--	--	--	--				
FOOTAGE	12,500 - 14,999	--	--	--	--	--	--	--	--
COSTS $		--	--	--	--	--	--	--	--
WELLS		--	--	--	--				
FOOTAGE	15,000 - 17,499	--	--	--	--	--	--	--	--
COSTS $		--	--	--	--	--	--	--	--
WELLS		--	--	--	--				
FOOTAGE	17,500 - 19,999	--	--	--	--	--	--	--	--
COSTS $		--	--	--	--	--	--	--	--
WELLS		--	--	--	--				
FOOTAGE	20,000 & OVER	--	--	--	--	--	--	--	--
COSTS $		--	--	--	--	--	--	--	--
TOTAL WELLS		81	21	113	215				
TOTAL FOOTAGE		114,994	27,701	172,926	315,621	1,420	1,319	1,530	1,468
TOTAL COSTS $		2,930,196	570,368	2,720,658	6,221,222	36,175	27,160	24,077	28,936

ESTIMATED COSTS OF DRILLING AND EQUIPPING WELLS, BY DEPTH INTERVALS - 1988

KANSAS

Table 20

	DEPTH INTERVAL (FEET)	TOTAL NUMBER OF WELLS, FOOTAGE DRILLED, AND COSTS				AVERAGE DEPTH AND COST PER WELL			
		OIL WELLS	GAS WELLS	DRY HOLES	TOTAL	OIL	GAS	DRY	TOTAL
WELLS		288	104	198	590				
FOOTAGE	0 - 1,249	231,027	77,034	173,152	481,213	802	741	875	816
COSTS $		4,914,913	1,803,552	2,025,932	8,744,397	17,066	17,342	10,232	14,821
WELLS		113	60	94	267				
FOOTAGE	1,250 - 2,499	193,129	101,327	158,431	452,887	1,709	1,689	1,685	1,696
COSTS $		4,706,470	4,881,487	2,518,402	12,106,359	41,650	81,358	26,792	45,342
WELLS		214	320	248	782				
FOOTAGE	2,500 - 3,749	708,250	923,555	827,933	2,459,738	3,310	2,886	3,338	3,145
COSTS $		17,614,813	49,381,792	12,476,008	79,472,613	82,312	154,318	50,306	101,627
WELLS		297	34	528	859				
FOOTAGE	3,750 - 4,999	1,290,753	149,883	2,298,879	3,739,515	4,346	4,408	4,354	4,353
COSTS $		33,333,790	4,627,275	34,300,216	72,261,281	112,235	136,096	64,963	84,123
WELLS		93	92	154	339				
FOOTAGE	5,000 - 7,499	529,492	539,513	880,751	1,949,756	5,693	5,864	5,719	5,751
COSTS $		21,918,066	20,980,482	19,032,815	61,931,363	235,678	228,049	123,590	182,688
WELLS		--	--	--	--				
FOOTAGE	7,500 - 9,999	--	--	--	--	--	--	--	--
COSTS $		--	--	--	--	--	--	--	--
WELLS		--	--	--	--				
FOOTAGE	10,000 - 12,499	--	--	--	--	--	--	--	--
COSTS $		--	--	--	--	--	--	--	--
WELLS		--	--	--	--				
FOOTAGE	12,500 - 14,999	--	--	--	--	--	--	--	--
COSTS $		--	--	--	--	--	--	--	--
WELLS		--	--	--	--				
FOOTAGE	15,000 - 17,499	--	--	--	--	--	--	--	--
COSTS $		--	--	--	--	--	--	--	--
WELLS		--	--	--	--				
FOOTAGE	17,500 - 19,999	--	--	--	--	--	--	--	--
COSTS $		--	--	--	--	--	--	--	--
WELLS		--	--	--	--				
FOOTAGE	20,000 & OVER	--	--	--	--	--	--	--	--
COSTS $		--	--	--	--	--	--	--	--
TOTAL WELLS		1,005	610	1,222	2,837				
TOTAL FOOTAGE		2,952,651	1,791,312	4,339,146	9,083,109	2,938	2,937	3,551	3,202
TOTAL COSTS $		82,488,052	81,674,588	70,353,373	234,516,013	82,078	133,893	57,572	82,663

ESTIMATED COSTS OF DRILLING AND EQUIPPING WELLS, BY DEPTH INTERVALS - 1988

KENTUCKY

Table 21

	DEPTH INTERVAL (FEET)	TOTAL NUMBER OF WELLS, FOOTAGE DRILLED, AND COSTS				AVERAGE DEPTH AND COST PER WELL			
		OIL WELLS	GAS WELLS	DRY HOLES	TOTAL	OIL	GAS	DRY	TOTAL
WELLS		106	71	119	296				
FOOTAGE	0 - 1,249	81,816	54,307	92,695	228,818	772	765	779	773
COSTS $		3,147,612	2,064,770	1,280,988	6,493,370	29,694	29,081	10,765	21,937
WELLS		119	115	131	365				
FOOTAGE	1,250 - 2,499	212,177	227,107	235,496	674,780	1,783	1,975	1,798	1,849
COSTS $		7,421,807	8,843,513	4,316,748	20,582,068	62,368	76,900	32,952	56,389
WELLS		36	123	20	179				
FOOTAGE	2,500 - 3,749	108,362	377,344	56,700	542,406	3,010	3,068	2,835	3,030
COSTS $		3,815,364	16,001,361	1,048,979	20,865,704	105,982	130,092	52,449	116,568
WELLS		8	26	1	35				
FOOTAGE	3,750 - 4,999	34,400	107,525	4,500	146,425	4,300	4,136	4,500	4,184
COSTS $		1,375,578	4,700,916	93,631	6,170,125	171,947	180,804	93,631	176,289
WELLS		1	2	--	3				
FOOTAGE	5,000 - 7,499	5,296	12,239	--	17,535	5,296	6,120	--	5,845
COSTS $		255,038	465,331	--	720,369	255,038	232,666	--	240,123
WELLS		--	--	--	--				
FOOTAGE	7,500 - 9,999	--	--	--	--	--	--	--	--
COSTS $		--	--	--	--	--	--	--	--
WELLS		--	--	--	--				
FOOTAGE	10,000 - 12,499	--	--	--	--	--	--	--	--
COSTS $		--	--	--	--	--	--	--	--
WELLS		--	--	--	--				
FOOTAGE	12,500 - 14,999	--	--	--	--	--	--	--	--
COSTS $		--	--	--	--	--	--	--	--
WELLS		--	--	--	--				
FOOTAGE	15,000 - 17,499	--	--	--	--	--	--	--	--
COSTS $		--	--	--	--	--	--	--	--
WELLS		--	--	--	--				
FOOTAGE	17,500 - 19,999	--	--	--	--	--	--	--	--
COSTS $		--	--	--	--	--	--	--	--
WELLS		--	--	--	--				
FOOTAGE	20,000 & OVER	--	--	--	--	--	--	--	--
COSTS $		--	--	--	--	--	--	--	--
TOTAL WELLS		270	337	271	878				
TOTAL FOOTAGE		442,051	778,522	389,391	1,609,964	1,637	2,310	1,437	1,834
TOTAL COSTS $		16,015,399	32,075,891	6,740,346	54,831,636	59,316	95,181	24,872	62,451

ESTIMATED COSTS OF DRILLING AND EQUIPPING WELLS, BY DEPTH INTERVALS - 1988

LOUISIANA - TOTAL

Table 22

DEPTH INTERVAL (FEET)		TOTAL NUMBER OF WELLS, FOOTAGE DRILLED, AND COSTS				AVERAGE DEPTH AND COST PER WELL			
		OIL WELLS	GAS WELLS	DRY HOLES	TOTAL	OIL	GAS	DRY	TOTAL
WELLS		48	13	14	75				
FOOTAGE	0 - 1,249	50,667	12,566	12,652	75,885	1,056	967	904	1,012
COSTS $		1,424,337	324,075	161,747	1,910,159	29,674	24,929	11,553	25,469
WELLS		83	76	29	188				
FOOTAGE	1,250 - 2,499	165,601	171,582	52,195	389,378	1,995	2,258	1,800	2,071
COSTS $		6,878,105	3,562,879	700,069	11,141,053	82,869	46,880	24,140	59,261
WELLS		120	50	126	296				
FOOTAGE	2,500 - 3,749	381,053	154,331	388,035	923,419	3,175	3,087	3,080	3,120
COSTS $		16,141,591	7,464,517	7,506,107	31,112,215	134,513	149,290	59,572	105,109
WELLS		59	28	73	160				
FOOTAGE	3,750 - 4,999	258,432	118,170	316,786	693,388	4,380	4,220	4,340	4,334
COSTS $		12,844,407	5,070,069	12,765,843	30,680,319	217,702	181,074	174,875	191,752
WELLS		87	40	159	286				
FOOTAGE	5,000 - 7,499	555,018	257,215	999,504	1,811,737	6,380	6,430	6,286	6,335
COSTS $		51,326,459	23,978,426	61,137,440	136,442,325	589,959	599,461	384,512	477,071
WELLS		124	90	189	403				
FOOTAGE	7,500 - 9,999	1,066,898	806,880	1,645,302	3,519,080	8,604	8,965	8,705	8,732
COSTS $		127,182,923	74,643,305	165,027,654	366,853,882	1,025,669	829,370	873,162	910,307
WELLS		75	103	191	369				
FOOTAGE	10,000 - 12,499	829,501	1,152,493	2,139,392	4,121,386	11,060	11,189	11,201	11,169
COSTS $		123,823,569	180,208,061	250,387,638	554,419,268	1,650,981	1,749,593	1,310,930	1,502,491
WELLS		28	53	103	184				
FOOTAGE	12,500 - 14,999	377,942	725,815	1,413,965	2,517,722	13,498	13,695	13,728	13,683
COSTS $		89,683,820	164,662,445	229,870,675	484,216,940	3,202,994	3,106,839	2,231,754	2,631,614
WELLS		7	44	62	113				
FOOTAGE	15,000 - 17,499	108,211	707,949	982,497	1,798,657	15,459	16,090	15,847	15,917
COSTS $		35,349,612	225,758,609	212,339,399	473,447,620	5,049,945	5,130,878	3,424,829	4,189,802
WELLS		6	14	23	43				
FOOTAGE	17,500 - 19,999	111,178	255,511	426,869	793,558	18,530	18,251	18,560	18,455
COSTS $		34,304,146	117,371,125	131,168,999	282,844,270	5,717,358	8,383,652	5,703,000	6,577,774
WELLS		1	--	4	5				
FOOTAGE	20,000 & OVER	20,152	--	81,358	101,510	20,152	--	20,340	20,302
COSTS $		3,991,973	--	31,421,065	35,413,038	3,991,973	--	7,855,267	7,082,608
TOTAL WELLS		638	511	973	2,122				
TOTAL FOOTAGE		3,924,653	4,362,512	8,458,555	16,745,720	6,151	8,537	8,693	7,891
TOTAL COSTS $		502,950,942	803,043,511	1,102,486,636	2,408,481,089	788,324	1,571,514	1,133,080	1,135,005

ESTIMATED COSTS OF DRILLING AND EQUIPPING WELLS, BY DEPTH INTERVALS - 1988

LOUISIANA - NORTH

Table 23

	DEPTH INTERVAL (FEET)	TOTAL NUMBER OF WELLS, FOOTAGE DRILLED, AND COSTS				AVERAGE DEPTH AND COST PER WELL			
		OIL WELLS	GAS WELLS	DRY HOLES	TOTAL	OIL	GAS	DRY	TOTAL
WELLS		48	13	14	75				
FOOTAGE	0 - 1,249	50,667	12,566	12,652	75,885	1,056	967	904	1,012
COSTS $		1,424,337	324,075	161,747	1,910,159	29,674	24,929	11,553	25,469
WELLS		64	76	26	166				
FOOTAGE	1,250 - 2,499	128,276	171,582	46,096	345,954	2,004	2,258	1,773	2,084
COSTS $		3,722,780	3,562,879	590,142	7,875,801	58,168	46,880	22,698	47,445
WELLS		95	44	118	257				
FOOTAGE	2,500 - 3,749	298,821	135,921	361,482	796,224	3,145	3,089	3,063	3,098
COSTS $		10,401,368	3,533,878	5,188,996	19,124,242	109,488	80,315	43,975	74,413
WELLS		44	27	57	128				
FOOTAGE	3,750 - 4,999	191,190	113,280	246,620	551,090	4,345	4,196	4,327	4,305
COSTS $		6,238,765	3,819,233	3,774,340	13,832,338	141,790	141,453	66,216	108,065
WELLS		28	26	94	148				
FOOTAGE	5,000 - 7,499	171,632	166,039	579,027	916,698	6,130	6,386	6,160	6,194
COSTS $		7,148,478	7,506,134	10,734,393	25,389,005	255,303	288,697	114,196	171,547
WELLS		13	53	42	108				
FOOTAGE	7,500 - 9,999	111,721	473,738	360,633	946,092	8,594	8,938	8,587	8,760
COSTS $		5,221,537	31,197,897	12,039,871	48,459,305	401,657	588,640	286,664	448,697
WELLS		2	28	12	42				
FOOTAGE	10,000 - 12,499	21,160	297,481	127,119	445,760	10,580	10,624	10,593	10,613
COSTS $		1,613,750	30,293,958	5,584,035	37,491,743	806,875	1,081,927	465,336	892,661
WELLS		--	1	--	1				
FOOTAGE	12,500 - 14,999	--	12,800	--	12,800	--	12,800	--	12,800
COSTS $		--	1,730,196	--	1,730,196	--	1,730,196	--	1,730,196
WELLS		--	--	--	--				
FOOTAGE	15,000 - 17,499	--	--	--	--	--	--	--	--
COSTS $		--	--	--	--	--	--	--	--
WELLS		--	--	--	--				
FOOTAGE	17,500 - 19,999	--	--	--	--	--	--	--	--
COSTS $		--	--	--	--	--	--	--	--
WELLS		--	--	--	--				
FOOTAGE	20,000 & OVER	--	--	--	--	--	--	--	--
COSTS $		--	--	--	--	--	--	--	--
TOTAL WELLS		294	268	363	925				
TOTAL FOOTAGE		973,467	1,383,407	1,733,629	4,090,503	3,311	5,162	4,776	4,422
TOTAL COSTS $		35,771,015	81,968,250	38,073,524	155,812,789	121,670	305,852	104,886	168,446

ESTIMATED COSTS OF DRILLING AND EQUIPPING WELLS, BY DEPTH INTERVALS - 1988

LOUISIANA - SOUTH

Table 24

	DEPTH INTERVAL (FEET)	TOTAL NUMBER OF WELLS, FOOTAGE DRILLED, AND COSTS				AVERAGE DEPTH AND COST PER WELL			
		OIL WELLS	GAS WELLS	DRY HOLES	TOTAL	OIL	GAS	DRY	TOTAL
WELLS		--	--	--	--				
FOOTAGE	0 - 1,249	--	--	--	--	--	--	--	--
COSTS $		--	--	--	--	--	--	--	--
WELLS		19	--	3	22				
FOOTAGE	1,250 - 2,499	37,325	--	6,099	43,424	1,964	--	2,033	1,974
COSTS $		3,155,325	--	109,927	3,265,252	166,070	--	36,642	148,421
WELLS		25	5	5	35				
FOOTAGE	2,500 - 3,749	82,232	15,429	16,053	113,714	3,289	3,086	3,211	3,249
COSTS $		5,740,223	2,454,661	647,607	8,842,491	229,609	490,932	129,521	252,643
WELLS		14	--	8	22				
FOOTAGE	3,750 - 4,999	62,937	--	35,762	98,699	4,496	--	4,470	4,486
COSTS $		5,074,308	--	1,715,108	6,789,416	362,451	--	214,389	308,610
WELLS		39	4	31	74				
FOOTAGE	5,000 - 7,499	254,170	25,150	204,342	483,662	6,517	6,288	6,592	6,536
COSTS $		17,033,803	2,640,891	9,590,655	29,265,349	436,764	660,223	309,376	395,478
WELLS		62	19	75	156				
FOOTAGE	7,500 - 9,999	528,878	171,648	655,543	1,356,069	8,530	9,034	8,741	8,693
COSTS $		43,723,044	14,731,192	33,279,574	91,733,810	705,210	775,326	443,728	588,037
WELLS		40	41	97	178				
FOOTAGE	10,000 - 12,499	441,320	465,543	1,085,217	1,992,080	11,033	11,355	11,188	11,191
COSTS $		43,486,947	56,139,195	69,748,799	169,374,941	1,087,174	1,369,249	719,060	951,545
WELLS		15	24	54	93				
FOOTAGE	12,500 - 14,999	201,256	325,235	744,248	1,270,739	13,417	13,551	13,782	13,664
COSTS $		31,694,464	45,006,294	76,135,419	152,836,177	2,112,964	1,875,262	1,409,915	1,643,400
WELLS		3	27	38	68				
FOOTAGE	15,000 - 17,499	45,200	435,353	602,501	1,083,054	15,067	16,124	15,855	15,927
COSTS $		8,207,900	99,498,275	94,079,634	201,785,809	2,735,967	3,685,121	2,475,780	2,967,438
WELLS		3	10	11	24				
FOOTAGE	17,500 - 19,999	54,850	184,293	204,142	443,285	18,283	18,429	18,558	18,470
COSTS $		13,205,653	64,069,789	48,334,055	125,609,497	4,401,885	6,406,979	4,394,005	5,233,729
WELLS		--	--	3	3				
FOOTAGE	20,000 & OVER	--	--	60,500	60,500	--	--	20,167	20,167
COSTS $		--	--	21,084,993	21,084,993	--	--	7,028,331	7,028,331
TOTAL WELLS		220	130	325	675				
TOTAL FOOTAGE		1,708,168	1,622,651	3,614,407	6,945,226	7,764	12,482	11,121	10,289
TOTAL COSTS $		171,321,667	284,540,297	354,725,771	810,587,735	778,735	2,188,772	1,091,464	1,200,871

ESTIMATED COSTS OF DRILLING AND EQUIPPING WELLS, BY DEPTH INTERVALS - 1988

LOUISIANA - OFFSHORE

Table 25

DEPTH INTERVAL (FEET)		TOTAL NUMBER OF WELLS, FOOTAGE DRILLED, AND COSTS				AVERAGE DEPTH AND COST PER WELL			
		OIL WELLS	GAS WELLS	DRY HOLES	TOTAL	OIL	GAS	DRY	TOTAL
WELLS		--	--	--	--				
FOOTAGE	0 - 1,249	--	--	--	--	--	--	--	--
COSTS $		--	--	--	--	--	--	--	--
WELLS		--	--	--	--				
FOOTAGE	1,250 - 2,499	--	--	--	--	--	--	--	--
COSTS $		--	--	--	--	--	--	--	--
WELLS		--	1	3	4				
FOOTAGE	2,500 - 3,749	--	2,981	10,500	13,481	--	2,981	3,500	3,370
COSTS $		--	1,475,978	1,669,504	3,145,482	--	1,475,978	556,501	786,371
WELLS		1	1	8	10				
FOOTAGE	3,750 - 4,999	4,305	4,890	34,404	43,599	4,305	4,890	4,301	4,360
COSTS $		1,531,334	1,250,836	7,276,395	10,058,565	1,531,334	1,250,836	909,549	1,005,857
WELLS		20	10	34	64				
FOOTAGE	5,000 - 7,499	129,216	66,026	216,135	411,377	6,461	6,603	6,357	6,428
COSTS $		27,144,178	13,831,401	40,812,392	81,787,971	1,357,209	1,383,140	1,200,365	1,277,937
WELLS		49	18	72	139				
FOOTAGE	7,500 - 9,999	426,299	161,494	629,126	1,216,919	8,700	8,972	8,738	8,755
COSTS $		78,238,342	28,714,216	119,708,209	226,660,767	1,596,701	1,595,234	1,662,614	1,630,653
WELLS		33	34	82	149				
FOOTAGE	10,000 - 12,499	367,021	389,469	927,056	1,683,546	11,122	11,455	11,306	11,299
COSTS $		78,722,872	93,774,908	175,054,804	347,552,584	2,385,542	2,758,086	2,134,815	2,332,568
WELLS		13	28	49	90				
FOOTAGE	12,500 - 14,999	176,686	387,780	669,717	1,234,183	13,591	13,849	13,668	13,713
COSTS $		57,989,356	117,925,955	153,735,256	329,650,567	4,460,720	4,211,642	3,137,454	3,662,784
WELLS		4	17	24	45				
FOOTAGE	15,000 - 17,499	63,011	272,596	379,996	715,603	15,753	16,035	15,833	15,902
COSTS $		27,141,712	126,260,334	118,259,765	271,661,811	6,785,428	7,427,079	4,927,490	6,036,929
WELLS		3	4	12	19				
FOOTAGE	17,500 - 19,999	56,328	71,218	222,727	350,273	18,776	17,805	18,561	18,435
COSTS $		21,098,493	53,301,336	82,834,944	157,234,773	7,032,831	13,325,334	6,902,912	8,275,515
WELLS		1	--	1	2				
FOOTAGE	20,000 & OVER	20,152	--	20,858	41,010	20,152	--	20,858	20,505
COSTS $		3,991,973	--	10,336,072	14,328,045	3,991,973	--	10,336,072	7,164,023
TOTAL WELLS		124	113	285	522				
TOTAL FOOTAGE		1,243,018	1,356,454	3,110,519	5,709,991	10,024	12,004	10,914	10,939
TOTAL COSTS $		295,858,260	436,534,964	709,687,341	1,442,080,565	2,385,954	3,863,141	2,490,131	2,762,607

ESTIMATED COSTS OF DRILLING AND EQUIPPING WELLS, BY DEPTH INTERVALS - 1988

MICHIGAN

Table 26

	DEPTH INTERVAL (FEET)	TOTAL NUMBER OF WELLS, FOOTAGE DRILLED, AND COSTS				AVERAGE DEPTH AND COST PER WELL			
		OIL WELLS	GAS WELLS	DRY HOLES	TOTAL	OIL	GAS	DRY	TOTAL
WELLS		--	4	2	6				
FOOTAGE	0 - 1,249	--	4,939	2,077	7,016	--	1,235	1,039	1,169
COSTS $		--	177,755	106,847	284,602	--	44,439	53,424	47,434
WELLS		--	263	12	275				
FOOTAGE	1,250 - 2,499	--	398,226	21,577	419,803	--	1,514	1,798	1,527
COSTS $		--	20,676,357	999,437	21,675,794	--	78,617	83,286	78,821
WELLS		16	5	40	61				
FOOTAGE	2,500 - 3,749	54,024	15,910	132,779	202,713	3,377	3,182	3,319	3,323
COSTS $		3,068,051	1,317,313	7,217,803	11,603,167	191,753	263,463	180,445	190,216
WELLS		42	5	80	127				
FOOTAGE	3,750 - 4,999	181,449	22,935	344,896	549,280	4,320	4,587	4,311	4,325
COSTS $		10,751,901	2,241,877	16,384,817	29,378,595	255,998	448,375	204,810	231,328
WELLS		13	6	75	94				
FOOTAGE	5,000 - 7,499	77,688	36,595	462,602	576,885	5,976	6,099	6,168	6,137
COSTS $		3,828,578	3,285,782	20,532,910	27,647,270	294,506	547,630	273,772	294,120
WELLS		--	5	15	20				
FOOTAGE	7,500 - 9,999	--	44,569	129,326	173,895	--	8,914	8,622	8,695
COSTS $		--	5,713,415	9,473,196	15,186,611	--	1,142,683	631,546	759,331
WELLS		2	31	13	46				
FOOTAGE	10,000 - 12,499	22,911	349,528	143,358	515,797	11,456	11,275	11,028	11,213
COSTS $		4,082,742	87,273,588	18,515,668	109,871,998	2,041,371	2,815,277	1,424,282	2,388,522
WELLS		--	--	2	2				
FOOTAGE	12,500 - 14,999	--	--	25,561	25,561	--	--	12,781	12,781
COSTS $		--	--	3,914,603	3,914,603	--	--	1,957,302	1,957,302
WELLS		--	--	--	--				
FOOTAGE	15,000 - 17,499	--	--	--	--	--	--	--	--
COSTS $		--	--	--	--	--	--	--	--
WELLS		--	--	--	--				
FOOTAGE	17,500 - 19,999	--	--	--	--	--	--	--	--
COSTS $		--	--	--	--	--	--	--	--
WELLS		--	--	--	--				
FOOTAGE	20,000 & OVER	--	--	--	--	--	--	--	--
COSTS $		--	--	--	--	--	--	--	--
TOTAL WELLS		73	319	239	631				
TOTAL FOOTAGE		336,072	872,702	1,262,176	2,470,950	4,604	2,736	5,281	3,916
TOTAL COSTS $		21,731,272	120,686,087	77,145,281	219,562,640	297,689	378,326	322,784	347,960

ESTIMATED COSTS OF DRILLING AND EQUIPPING WELLS, BY DEPTH INTERVALS - 1988

MISSISSIPPI

Table 27

	DEPTH INTERVAL (FEET)	TOTAL NUMBER OF WELLS, FOOTAGE DRILLED, AND COSTS				AVERAGE DEPTH AND COST PER WELL			
		OIL WELLS	GAS WELLS	DRY HOLES	TOTAL	OIL	GAS	DRY	TOTAL
WELLS		--	--	1	1				
FOOTAGE	0 - 1,249	--	--	190	190	--	--	190	190
COSTS $		--	--	9,310	9,310	--	--	9,310	9,310
WELLS		--	3	10	13				
FOOTAGE	1,250 - 2,499	--	5,942	20,361	26,303	--	1,981	2,036	2,023
COSTS $		--	312,390	670,430	982,820	--	104,130	67,043	75,602
WELLS		1	9	13	23				
FOOTAGE	2,500 - 3,749	3,550	24,377	39,059	66,986	3,550	2,709	3,005	2,912
COSTS $		113,664	1,316,088	931,140	2,360,892	113,664	146,232	71,626	102,647
WELLS		3	8	27	38				
FOOTAGE	3,750 - 4,999	13,975	33,983	116,364	164,322	4,658	4,248	4,310	4,324
COSTS $		245,048	1,616,907	2,160,607	4,022,562	81,683	202,113	80,022	105,857
WELLS		34	2	62	98				
FOOTAGE	5,000 - 7,499	218,673	14,208	412,036	644,917	6,432	7,104	6,646	6,581
COSTS $		9,148,063	653,268	8,003,784	17,805,115	269,061	326,634	129,093	181,685
WELLS		10	1	15	26				
FOOTAGE	7,500 - 9,999	83,933	7,859	129,660	221,452	8,393	7,859	8,644	8,517
COSTS $		3,630,921	359,008	4,507,360	8,497,289	363,092	359,008	300,491	326,819
WELLS		30	1	37	68				
FOOTAGE	10,000 - 12,499	346,857	10,200	412,717	769,774	11,562	10,200	11,155	11,320
COSTS $		23,746,587	531,237	18,106,575	42,384,399	791,553	531,237	489,367	623,300
WELLS		15	--	28	43				
FOOTAGE	12,500 - 14,999	201,946	--	382,107	584,053	13,463	--	13,647	13,583
COSTS $		16,220,796	--	20,822,160	37,042,956	1,081,386	--	743,649	861,464
WELLS		10	3	10	23				
FOOTAGE	15,000 - 17,499	158,608	47,290	159,283	365,181	15,861	15,763	15,928	15,877
COSTS $		16,497,237	13,553,816	14,985,243	45,036,296	1,649,724	4,517,939	1,498,524	1,958,100
WELLS		4	--	4	8				
FOOTAGE	17,500 - 19,999	74,455	--	74,151	148,606	18,614	--	18,538	18,576
COSTS $		7,597,693	--	8,022,028	15,619,721	1,899,423	--	2,005,507	1,952,465
WELLS		--	--	--	--				
FOOTAGE	20,000 & OVER	--	--	--	--	--	--	--	--
COSTS $		--	--	--	--	--	--	--	--
TOTAL WELLS		107	27	207	341				
TOTAL FOOTAGE		1,101,997	143,859	1,745,928	2,991,784	10,299	5,328	8,434	8,774
TOTAL COSTS $		77,200,009	18,342,714	78,218,637	173,761,360	721,495	679,360	377,868	509,564

ESTIMATED COSTS OF DRILLING AND EQUIPPING WELLS, BY DEPTH INTERVALS - 1988

MONTANA

Table 28

	DEPTH INTERVAL (FEET)	TOTAL NUMBER OF WELLS, FOOTAGE DRILLED, AND COSTS				AVERAGE DEPTH AND COST PER WELL			
		OIL WELLS	GAS WELLS	DRY HOLES	TOTAL	OIL	GAS	DRY	TOTAL
WELLS		--	10	9	19				
FOOTAGE	0 - 1,249	--	9,814	8,184	17,998	--	981	909	947
COSTS $		--	324,484	249,649	574,133	--	32,448	27,739	30,218
WELLS		26	59	57	142				
FOOTAGE	1,250 - 2,499	44,244	98,979	94,609	237,832	1,702	1,678	1,660	1,675
COSTS $		1,588,375	2,493,768	2,425,883	6,508,026	61,091	42,267	42,559	45,831
WELLS		13	4	19	36				
FOOTAGE	2,500 - 3,749	39,694	11,087	57,393	108,174	3,053	2,772	3,021	3,005
COSTS $		1,388,361	436,391	1,733,938	3,558,690	106,797	109,098	91,260	98,853
WELLS		3	--	18	21				
FOOTAGE	3,750 - 4,999	13,181	--	77,976	91,157	4,394	--	4,332	4,341
COSTS $		633,135	--	1,861,545	2,494,680	211,045	--	103,419	118,794
WELLS		11	--	30	41				
FOOTAGE	5,000 - 7,499	70,450	--	184,879	255,329	6,405	--	6,163	6,228
COSTS $		4,094,652	--	7,424,384	11,519,036	372,241	--	247,479	280,952
WELLS		27	--	14	41				
FOOTAGE	7,500 - 9,999	240,874	--	111,516	352,390	8,921	--	7,965	8,595
COSTS $		13,637,174	--	4,802,038	18,439,212	505,081	--	343,003	449,737
WELLS		10	--	8	18				
FOOTAGE	10,000 - 12,499	111,555	--	88,238	199,793	11,156	--	11,030	11,100
COSTS $		8,515,270	--	4,634,510	13,149,780	851,527	--	579,314	730,543
WELLS		2	--	2	4				
FOOTAGE	12,500 - 14,999	25,063	--	25,498	50,561	12,532	--	12,749	12,640
COSTS $		2,033,862	--	1,167,639	3,201,501	1,016,931	--	583,820	800,375
WELLS		--	--	1	1				
FOOTAGE	15,000 - 17,499	--	--	15,800	15,800	--	--	15,800	15,800
COSTS $		--	--	12,542,919	12,542,919	--	--	12,542,919	12,542,919
WELLS		--	--	--	--				
FOOTAGE	17,500 - 19,999	--	--	--	--	--	--	--	--
COSTS $		--	--	--	--	--	--	--	--
WELLS		--	--	--	--				
FOOTAGE	20,000 & OVER	--	--	--	--	--	--	--	--
COSTS $		--	--	--	--	--	--	--	--
TOTAL WELLS		92	73	158	323				
TOTAL FOOTAGE		545,061	119,880	664,093	1,329,034	5,925	1,642	4,203	4,115
TOTAL COSTS $		31,890,829	3,254,643	36,842,505	71,987,977	346,639	44,584	233,180	222,873

ESTIMATED COSTS OF DRILLING AND EQUIPPING WELLS, BY DEPTH INTERVALS - 1988

NEBRASKA

Table 29

DEPTH INTERVAL (FEET)		TOTAL NUMBER OF WELLS, FOOTAGE DRILLED, AND COSTS				AVERAGE DEPTH AND COST PER WELL			
		OIL WELLS	GAS WELLS	DRY HOLES	TOTAL	OIL	GAS	DRY	TOTAL
WELLS		--	--	--	--				
FOOTAGE	0 - 1,249	--	--	--	--	--	--	--	--
COSTS $		--	--	--	--	--	--	--	--
WELLS		--	--	--	--				
FOOTAGE	1,250 - 2,499	--	--	--	--	--	--	--	--
COSTS $		--	--	--	--	--	--	--	--
WELLS		2	--	6	8				
FOOTAGE	2,500 - 3,749	7,349	--	21,239	28,588	3,675	--	3,540	3,574
COSTS $		266,953	--	382,739	649,692	133,477	--	63,790	81,212
WELLS		23	--	41	64				
FOOTAGE	3,750 - 4,999	101,551	--	184,204	285,755	4,415	--	4,493	4,465
COSTS $		2,682,040	--	1,959,575	4,641,615	116,610	--	47,795	72,525
WELLS		11	--	36	47				
FOOTAGE	5,000 - 7,499	64,491	--	217,056	281,547	5,863	--	6,029	5,990
COSTS $		2,211,450	--	3,761,453	5,972,903	201,041	--	104,485	127,083
WELLS		2	--	12	14				
FOOTAGE	7,500 - 9,999	17,015	--	98,442	115,457	8,508	--	8,204	8,247
COSTS $		1,390,595	--	5,566,294	6,956,889	695,298	--	463,858	496,921
WELLS		--	--	--	--				
FOOTAGE	10,000 - 12,499	--	--	--	--	--	--	--	--
COSTS $		--	--	--	--	--	--	--	--
WELLS		--	--	--	--				
FOOTAGE	12,500 - 14,999	--	--	--	--	--	--	--	--
COSTS $		--	--	--	--	--	--	--	--
WELLS		--	--	--	--				
FOOTAGE	15,000 - 17,499	--	--	--	--	--	--	--	--
COSTS $		--	--	--	--	--	--	--	--
WELLS		--	--	--	--				
FOOTAGE	17,500 - 19,999	--	--	--	--	--	--	--	--
COSTS $		--	--	--	--	--	--	--	--
WELLS		--	--	--	--				
FOOTAGE	20,000 & OVER	--	--	--	--	--	--	--	--
COSTS $		--	--	--	--	--	--	--	--
TOTAL WELLS		38	--	95	133				
TOTAL FOOTAGE		190,406	--	520,941	711,347	5,011	--	5,484	5,348
TOTAL COSTS $		6,551,038	--	11,670,061	18,221,099	172,396	--	122,843	137,001

ESTIMATED COSTS OF DRILLING AND EQUIPPING WELLS, BY DEPTH INTERVALS - 1988

Table 30

NEW MEXICO - TOTAL

	DEPTH INTERVAL (FEET)	TOTAL NUMBER OF WELLS, FOOTAGE DRILLED, AND COSTS				AVERAGE DEPTH AND COST PER WELL			
		OIL WELLS	GAS WELLS	DRY HOLES	TOTAL	OIL	GAS	DRY	TOTAL
WELLS		3	1	18	22				
FOOTAGE	0 - 1,249	2,330	1,165	8,152	11,647	777	1,165	453	529
COSTS $		23,140	30,280	456,474	509,894	7,713	30,280	25,360	23,177
WELLS		25	18	17	60				
FOOTAGE	1,250 - 2,499	49,735	33,013	33,795	116,543	1,989	1,834	1,988	1,942
COSTS $		2,708,819	2,766,646	1,884,687	7,360,152	108,353	153,703	110,864	122,669
WELLS		29	175	15	219				
FOOTAGE	2,500 - 3,749	98,067	552,481	47,268	697,816	3,382	3,157	3,151	3,186
COSTS $		5,344,262	43,121,511	2,555,854	51,021,627	184,285	246,409	170,390	232,975
WELLS		139	30	11	180				
FOOTAGE	3,750 - 4,999	606,189	126,163	47,612	779,964	4,361	4,205	4,328	4,333
COSTS $		28,851,106	7,266,586	1,848,596	37,966,288	207,562	242,220	168,054	210,924
WELLS		63	43	14	120				
FOOTAGE	5,000 - 7,499	387,191	257,028	88,866	733,085	6,146	5,977	6,348	6,109
COSTS $		21,594,907	12,395,228	3,441,141	37,431,276	342,776	288,261	245,796	311,927
WELLS		81	23	25	129				
FOOTAGE	7,500 - 9,999	693,657	198,228	220,758	1,112,643	8,564	8,619	8,830	8,625
COSTS $		49,134,417	14,125,455	13,587,369	76,847,241	606,598	614,150	543,495	595,715
WELLS		42	8	44	94				
FOOTAGE	10,000 - 12,499	467,571	90,913	506,340	1,064,824	11,133	11,364	11,508	11,328
COSTS $		31,740,091	5,781,652	22,989,186	60,510,929	755,716	722,707	522,482	643,733
WELLS		12	20	11	43				
FOOTAGE	12,500 - 14,999	158,797	268,538	147,401	574,736	13,233	13,427	13,400	13,366
COSTS $		11,250,965	24,443,076	10,724,068	46,418,109	937,580	1,222,154	974,915	1,079,491
WELLS		--	5	3	8				
FOOTAGE	15,000 - 17,499	--	77,085	45,884	122,969	--	15,417	15,295	15,371
COSTS $		--	8,158,567	3,772,307	11,930,874	--	1,631,713	1,257,436	1,491,359
WELLS		--	--	--	--				
FOOTAGE	17,500 - 19,999	--	--	--	--	--	--	--	--
COSTS $		--	--	--	--	--	--	--	--
WELLS		--	--	--	--				
FOOTAGE	20,000 & OVER	--	--	--	--	--	--	--	--
COSTS $		--	--	--	--	--	--	--	--
TOTAL WELLS		394	323	158	875				
TOTAL FOOTAGE		2,463,537	1,604,614	1,146,076	5,214,227	6,253	4,968	7,254	5,959
TOTAL COSTS $		150,647,707	118,089,001	61,259,682	329,996,390	382,355	365,601	387,720	377,139

ESTIMATED COSTS OF DRILLING AND EQUIPPING WELLS, BY DEPTH INTERVALS - 1988

NEW MEXICO - WEST

Table 31

DEPTH INTERVAL (FEET)		TOTAL NUMBER OF WELLS, FOOTAGE DRILLED, AND COSTS				AVERAGE DEPTH AND COST PER WELL			
		OIL WELLS	GAS WELLS	DRY HOLES	TOTAL	OIL	GAS	DRY	TOTAL
WELLS		3	1	5	9				
FOOTAGE	0 - 1,249	2,330	1,165	4,031	7,526	777	1,165	806	836
COSTS $		23,140	30,280	154,873	208,293	7,713	30,280	30,975	23,144
WELLS		--	18	8	26				
FOOTAGE	1,250 - 2,499	--	33,013	14,989	48,002	--	1,834	1,874	1,846
COSTS $		--	2,766,646	980,044	3,746,690	--	153,703	122,506	144,103
WELLS		--	165	3	168				
FOOTAGE	2,500 - 3,749	--	518,129	8,768	526,897	--	3,140	2,923	3,136
COSTS $		--	41,381,843	739,264	42,121,107	--	250,799	246,421	250,721
WELLS		16	13	2	31				
FOOTAGE	3,750 - 4,999	76,618	53,055	8,376	138,049	4,789	4,081	4,188	4,453
COSTS $		2,646,309	3,527,561	341,188	6,515,058	165,394	271,351	170,594	210,163
WELLS		18	23	1	42				
FOOTAGE	5,000 - 7,499	104,219	133,927	5,800	243,946	5,790	5,823	5,800	5,808
COSTS $		5,627,099	6,371,490	292,968	12,291,557	312,617	277,021	292,968	292,656
WELLS		17	6	5	28				
FOOTAGE	7,500 - 9,999	137,563	48,315	40,499	226,377	8,092	8,053	8,100	8,085
COSTS $		11,778,464	4,318,642	5,926,241	22,023,347	692,851	719,774	1,185,248	786,548
WELLS		--	--	--	--				
FOOTAGE	10,000 - 12,499	--	--	--	--	--	--	--	--
COSTS $		--	--	--	--	--	--	--	--
WELLS		--	--	--	--				
FOOTAGE	12,500 - 14,999	--	--	--	--	--	--	--	--
COSTS $		--	--	--	--	--	--	--	--
WELLS		--	--	--	--				
FOOTAGE	15,000 - 17,499	--	--	--	--	--	--	--	--
COSTS $		--	--	--	--	--	--	--	--
WELLS		--	--	--	--				
FOOTAGE	17,500 - 19,999	--	--	--	--	--	--	--	--
COSTS $		--	--	--	--	--	--	--	--
WELLS		--	--	--	--				
FOOTAGE	20,000 & OVER	--	--	--	--	--	--	--	--
COSTS $		--	--	--	--	--	--	--	--
TOTAL WELLS		54	226	24	304				
TOTAL FOOTAGE		320,730	787,604	82,463	1,190,797	5,939	3,485	3,436	3,917
TOTAL COSTS $		20,075,012	58,396,462	8,434,578	86,906,052	371,759	258,391	351,441	285,875

ESTIMATED COSTS OF DRILLING AND EQUIPPING WELLS, BY DEPTH INTERVALS - 1988

NEW MEXICO - EAST

Table 32

DEPTH INTERVAL (FEET)		TOTAL NUMBER OF WELLS, FOOTAGE DRILLED, AND COSTS				AVERAGE DEPTH AND COST PER WELL			
		OIL WELLS	GAS WELLS	DRY HOLES	TOTAL	OIL	GAS	DRY	TOTAL
WELLS		--	--	13	13				
FOOTAGE	0 - 1,249	--	--	4,121	4,121	--	--	317	317
COSTS $		--	--	301,601	301,601	--	--	23,200	23,200
WELLS		25	--	9	34				
FOOTAGE	1,250 - 2,499	49,735	--	18,806	68,541	1,989	--	2,090	2,016
COSTS $		2,708,819	--	904,643	3,613,462	108,353	--	100,516	106,278
WELLS		29	10	12	51				
FOOTAGE	2,500 - 3,749	98,067	34,352	38,500	170,919	3,382	3,435	3,208	3,351
COSTS $		5,344,262	1,739,668	1,816,590	8,900,520	184,285	173,967	151,383	174,520
WELLS		123	17	9	149				
FOOTAGE	3,750 - 4,999	529,571	73,108	39,236	641,915	4,305	4,300	4,360	4,308
COSTS $		26,204,797	3,739,025	1,507,408	31,451,230	213,047	219,943	167,490	211,082
WELLS		45	20	13	78				
FOOTAGE	5,000 - 7,499	282,972	123,101	83,066	489,139	6,288	6,155	6,390	6,271
COSTS $		15,967,808	6,023,738	3,148,173	25,139,719	354,840	301,187	242,167	322,304
WELLS		64	17	20	101				
FOOTAGE	7,500 - 9,999	556,094	149,913	180,259	886,266	8,689	8,818	9,013	8,775
COSTS $		37,355,953	9,806,813	7,661,128	54,823,894	583,687	576,871	383,056	542,811
WELLS		42	8	44	94				
FOOTAGE	10,000 - 12,499	467,571	90,913	506,340	1,064,824	11,133	11,364	11,508	11,328
COSTS $		31,740,091	5,781,652	22,989,186	60,510,929	755,716	722,707	522,482	643,733
WELLS		12	20	11	43				
FOOTAGE	12,500 - 14,999	158,797	268,538	147,401	574,736	13,233	13,427	13,400	13,366
COSTS $		11,250,965	24,443,076	10,724,068	46,418,109	937,580	1,222,154	974,915	1,079,491
WELLS		--	5	3	8				
FOOTAGE	15,000 - 17,499	--	77,085	45,884	122,969	--	15,417	15,295	15,371
COSTS $		--	8,158,567	3,772,307	11,930,874	--	1,631,713	1,257,436	1,491,359
WELLS		--	--	--	--				
FOOTAGE	17,500 - 19,999	--	--	--	--	--	--	--	--
COSTS $		--	--	--	--	--	--	--	--
WELLS		--	--	--	--				
FOOTAGE	20,000 & OVER	--	--	--	--	--	--	--	--
COSTS $		--	--	--	--	--	--	--	--
TOTAL WELLS		340	97	134	571				
TOTAL FOOTAGE		2,142,807	817,010	1,063,613	4,023,430	6,302	8,423	7,937	7,046
TOTAL COSTS $		130,572,695	59,692,539	52,825,104	243,090,338	384,037	615,387	394,217	425,727

ESTIMATED COSTS OF DRILLING AND EQUIPPING WELLS, BY DEPTH INTERVALS - 1988

NORTH DAKOTA

Table 33

	DEPTH INTERVAL (FEET)	TOTAL NUMBER OF WELLS, FOOTAGE DRILLED, AND COSTS				AVERAGE DEPTH AND COST PER WELL			
		OIL WELLS	GAS WELLS	DRY HOLES	TOTAL	OIL	GAS	DRY	TOTAL
WELLS		--	--	--	--				
FOOTAGE	0 - 1,249	--	--	--	--	--	--	--	--
COSTS $		--	--	--	--	--	--	--	--
WELLS		--	--	--	--				
FOOTAGE	1,250 - 2,499	--	--	--	--	--	--	--	--
COSTS $		--	--	--	--	--	--	--	--
WELLS		16	--	14	30				
FOOTAGE	2,500 - 3,749	52,110	--	45,972	98,082	3,257	--	3,284	3,269
COSTS $		2,405,291	--	958,628	3,363,919	150,331	--	68,473	112,131
WELLS		10	--	13	23				
FOOTAGE	3,750 - 4,999	44,262	--	58,826	103,088	4,426	--	4,525	4,482
COSTS $		2,134,315	--	1,504,794	3,639,109	213,432	--	115,753	158,222
WELLS		25	--	28	53				
FOOTAGE	5,000 - 7,499	158,841	--	168,884	327,725	6,354	--	6,032	6,183
COSTS $		7,853,058	--	3,853,595	11,706,653	314,122	--	137,628	220,880
WELLS		39	--	37	76				
FOOTAGE	7,500 - 9,999	338,276	--	327,778	666,054	8,674	--	8,859	8,764
COSTS $		20,498,107	--	11,923,627	32,421,734	525,593	--	322,260	426,602
WELLS		23	--	15	38				
FOOTAGE	10,000 - 12,499	260,793	--	164,868	425,661	11,339	--	10,991	11,202
COSTS $		19,486,471	--	6,791,772	26,278,243	847,238	--	452,785	691,533
WELLS		25	1	11	37				
FOOTAGE	12,500 - 14,999	333,060	14,201	146,647	493,908	13,322	14,201	13,332	13,349
COSTS $		23,493,476	1,334,610	8,020,169	32,848,255	939,739	1,334,610	729,106	887,791
WELLS		--	--	1	1				
FOOTAGE	15,000 - 17,499	--	--	15,140	15,140	--	--	15,140	15,140
COSTS $		--	--	1,195,940	1,195,940	--	--	1,195,940	1,195,940
WELLS		--	--	--	--				
FOOTAGE	17,500 - 19,999	--	--	--	--	--	--	--	--
COSTS $		--	--	--	--	--	--	--	--
WELLS		--	--	--	--				
FOOTAGE	20,000 & OVER	--	--	--	--	--	--	--	--
COSTS $		--	--	--	--	--	--	--	--
TOTAL WELLS		138	1	119	258				
TOTAL FOOTAGE		1,187,342	14,201	928,115	2,129,658	8,604	14,201	7,799	8,254
TOTAL COSTS $		75,870,718	1,334,610	34,248,525	111,453,853	549,788	1,334,610	287,803	431,992

ESTIMATED COSTS OF DRILLING AND EQUIPPING WELLS, BY DEPTH INTERVALS - 1988

OKLAHOMA

Table 34

DEPTH INTERVAL (FEET)		TOTAL NUMBER OF WELLS, FOOTAGE DRILLED, AND COSTS				AVERAGE DEPTH AND COST PER WELL			
		OIL WELLS	GAS WELLS	DRY HOLES	TOTAL	OIL	GAS	DRY	TOTAL
WELLS		105	65	48	218				
FOOTAGE	0 - 1,249	91,286	62,814	39,159	193,259	869	966	816	887
COSTS $		2,824,897	1,345,928	876,349	5,047,174	26,904	20,707	18,257	23,152
WELLS		261	93	138	492				
FOOTAGE	1,250 - 2,499	467,683	171,894	255,348	894,925	1,792	1,848	1,850	1,819
COSTS $		18,604,910	5,974,546	6,662,582	31,242,038	71,283	64,242	48,280	63,500
WELLS		210	80	133	423				
FOOTAGE	2,500 - 3,749	655,350	256,451	423,628	1,335,429	3,121	3,206	3,185	3,157
COSTS $		29,390,436	12,243,254	10,854,303	52,487,993	139,954	153,041	81,611	124,085
WELLS		138	56	155	349				
FOOTAGE	3,750 - 4,999	602,809	240,562	682,733	1,526,104	4,368	4,296	4,405	4,373
COSTS $		26,155,667	11,583,686	16,647,886	54,387,239	189,534	206,852	107,406	155,837
WELLS		192	183	303	678				
FOOTAGE	5,000 - 7,499	1,192,817	1,192,444	1,866,395	4,251,656	6,213	6,516	6,160	6,271
COSTS $		54,424,284	62,811,079	52,708,723	169,944,086	283,460	343,230	173,956	250,655
WELLS		206	193	84	483				
FOOTAGE	7,500 - 9,999	1,818,702	1,636,962	724,997	4,180,661	8,829	8,482	8,631	8,656
COSTS $		103,573,910	90,736,364	24,940,419	219,250,693	502,786	470,137	296,910	453,935
WELLS		77	115	47	239				
FOOTAGE	10,000 - 12,499	831,068	1,282,042	529,617	2,642,727	10,793	11,148	11,268	11,057
COSTS $		52,792,836	101,754,042	30,997,908	185,544,786	685,621	884,818	659,530	776,338
WELLS		9	71	23	103				
FOOTAGE	12,500 - 14,999	118,483	958,387	313,947	1,390,817	13,165	13,498	13,650	13,503
COSTS $		13,679,909	107,945,849	25,004,586	146,630,344	1,519,990	1,520,364	1,087,156	1,423,596
WELLS		1	27	14	42				
FOOTAGE	15,000 - 17,499	15,461	429,183	223,846	668,490	15,461	15,896	15,989	15,916
COSTS $		2,413,413	71,129,490	29,360,581	102,903,484	2,413,413	2,634,426	2,097,184	2,450,083
WELLS		1	25	12	38				
FOOTAGE	17,500 - 19,999	17,748	448,966	215,403	682,117	17,748	17,959	17,950	17,950
COSTS $		7,938,617	94,163,723	43,781,226	145,883,566	7,938,617	3,766,549	3,648,436	3,839,041
WELLS		--	2	--	2				
FOOTAGE	20,000 & OVER	--	41,204	--	41,204	--	20,602	--	20,602
COSTS $		--	21,472,531	--	21,472,531	--	10,736,266	--	10,736,266
TOTAL WELLS		1,200	910	957	3,067				
TOTAL FOOTAGE		5,811,407	6,720,909	5,275,073	17,807,389	4,843	7,386	5,512	5,806
TOTAL COSTS $		311,798,879	581,160,492	241,834,563	1,134,793,934	259,832	638,638	252,701	370,001

ESTIMATED COSTS OF DRILLING AND EQUIPPING WELLS, BY DEPTH INTERVALS - 1988

TEXAS - TOTAL

Table 35

DEPTH INTERVAL (FEET)		TOTAL NUMBER OF WELLS, FOOTAGE DRILLED, AND COSTS				AVERAGE DEPTH AND COST PER WELL			
		OIL WELLS	GAS WELLS	DRY HOLES	TOTAL	OIL	GAS	DRY	TOTAL
WELLS		318	46	291	655				
FOOTAGE	0 - 1,249	249,204	38,140	219,031	506,375	784	829	753	773
COSTS $		6,409,753	1,050,817	3,547,293	11,007,863	20,156	22,844	12,190	16,806
WELLS		623	57	415	1,095				
FOOTAGE	1,250 - 2,499	1,103,184	113,185	775,185	1,991,554	1,771	1,986	1,868	1,819
COSTS $		41,196,836	3,853,478	14,740,693	59,791,007	66,127	67,605	35,520	54,604
WELLS		694	153	350	1,197				
FOOTAGE	2,500 - 3,749	2,188,028	494,939	1,106,035	3,789,002	3,153	3,235	3,160	3,165
COSTS $		91,465,062	19,355,149	23,566,576	134,386,787	131,794	126,504	67,333	112,270
WELLS		922	180	441	1,543				
FOOTAGE	3,750 - 4,999	4,185,498	774,091	1,931,026	6,890,615	4,540	4,301	4,379	4,466
COSTS $		148,667,676	26,348,339	44,428,400	219,444,415	161,245	146,380	100,745	142,219
WELLS		1,125	331	682	2,138				
FOOTAGE	5,000 - 7,499	6,870,443	2,064,495	4,123,020	13,057,958	6,107	6,237	6,045	6,108
COSTS $		295,774,410	93,145,238	121,610,542	510,530,190	262,911	281,406	178,315	238,789
WELLS		844	497	492	1,833				
FOOTAGE	7,500 - 9,999	7,252,031	4,307,799	4,236,595	15,796,425	8,592	8,668	8,611	8,618
COSTS $		372,159,454	318,711,066	192,234,427	883,104,947	440,947	641,270	390,720	481,781
WELLS		126	266	205	597				
FOOTAGE	10,000 - 12,499	1,384,395	2,947,676	2,251,987	6,584,058	10,987	11,081	10,985	11,029
COSTS $		92,527,826	322,668,834	174,967,438	590,164,098	734,348	1,213,041	853,500	988,550
WELLS		27	110	71	208				
FOOTAGE	12,500 - 14,999	352,183	1,489,718	961,712	2,803,613	13,044	13,543	13,545	13,479
COSTS $		41,269,795	266,970,930	140,485,763	448,726,488	1,528,511	2,427,009	1,978,673	2,157,339
WELLS		--	26	29	55				
FOOTAGE	15,000 - 17,499	--	409,822	465,359	875,181	--	15,762	16,047	15,912
COSTS $		--	95,905,901	96,598,618	192,504,519	--	3,688,689	3,330,987	3,500,082
WELLS		--	--	6	6				
FOOTAGE	17,500 - 19,999	--	--	107,596	107,596	--	--	17,933	17,933
COSTS $		--	--	31,538,125	31,538,125	--	--	5,256,354	5,256,354
WELLS		--	1	--	1				
FOOTAGE	20,000 & OVER	--	21,600	--	21,600	--	21,600	--	21,600
COSTS $		--	5,206,222	--	5,206,222	--	5,206,222	--	5,206,222
TOTAL WELLS		4,679	1,667	2,982	9,328				
TOTAL FOOTAGE		23,584,966	12,661,465	16,177,546	52,423,977	5,041	7,595	5,425	5,620
TOTAL COSTS $		1,089,470,812	1,153,215,974	843,717,875	3,086,404,661	232,843	691,791	282,937	330,875

ESTIMATED COSTS OF DRILLING AND EQUIPPING WELLS, BY DEPTH INTERVALS - 1988

TEXAS RRC DIST. 1

Table 36

DEPTH INTERVAL (FEET)		TOTAL NUMBER OF WELLS, FOOTAGE DRILLED, AND COSTS				AVERAGE DEPTH AND COST PER WELL			
		OIL WELLS	GAS WELLS	DRY HOLES	TOTAL	OIL	GAS	DRY	TOTAL
WELLS		70	3	64	137				
FOOTAGE	0 - 1,249	50,061	1,455	45,647	97,163	715	485	713	709
COSTS $		1,742,320	55,876	1,010,118	2,808,314	24,890	18,625	15,783	20,499
WELLS		157	5	99	261				
FOOTAGE	1,250 - 2,499	286,901	9,310	193,651	489,862	1,827	1,862	1,956	1,877
COSTS $		9,214,992	306,596	3,848,245	13,369,833	58,694	61,319	38,871	51,225
WELLS		59	7	52	118				
FOOTAGE	2,500 - 3,749	171,168	22,375	155,515	349,058	2,901	3,196	2,991	2,958
COSTS $		5,791,434	686,587	2,889,192	9,367,213	98,160	98,084	55,561	79,383
WELLS		9	8	23	40				
FOOTAGE	3,750 - 4,999	39,095	33,838	100,310	173,243	4,344	4,230	4,361	4,331
COSTS $		1,246,009	1,102,375	1,808,579	4,156,963	138,445	137,797	78,634	103,924
WELLS		114	24	54	192				
FOOTAGE	5,000 - 7,499	657,939	129,933	318,866	1,106,738	5,771	5,414	5,905	5,764
COSTS $		20,293,028	3,704,392	6,676,921	30,674,341	178,009	154,350	123,647	159,762
WELLS		30	5	15	50				
FOOTAGE	7,500 - 9,999	255,019	44,900	129,137	429,056	8,501	8,980	8,609	8,581
COSTS $		11,067,411	2,332,076	3,009,368	16,408,855	368,914	466,415	200,625	328,177
WELLS		14	16	3	33				
FOOTAGE	10,000 - 12,499	143,028	180,394	32,947	356,369	10,216	11,275	10,982	10,799
COSTS $		7,005,599	27,533,396	1,165,395	35,704,390	500,400	1,720,837	388,465	1,081,951
WELLS		--	2	--	2				
FOOTAGE	12,500 - 14,999	--	25,405	--	25,405	--	12,703	--	12,703
COSTS $		--	2,733,815	--	2,733,815	--	1,366,908	--	1,366,908
WELLS		--	1	1	2				
FOOTAGE	15,000 - 17,499	--	15,000	15,560	30,560	--	15,000	15,560	15,280
COSTS $		--	2,989,239	3,104,705	6,093,944	--	2,989,239	3,104,705	3,046,972
WELLS		--	--	--	--				
FOOTAGE	17,500 - 19,999	--	--	--	--	--	--	--	--
COSTS $		--	--	--	--	--	--	--	--
WELLS		--	--	--	--				
FOOTAGE	20,000 & OVER	--	--	--	--	--	--	--	--
COSTS $		--	--	--	--	--	--	--	--
TOTAL WELLS		453	71	311	835				
TOTAL FOOTAGE		1,603,211	462,610	991,633	3,057,454	3,539	6,516	3,189	3,662
TOTAL COSTS $		56,360,793	41,444,352	23,512,523	121,317,668	124,417	583,723	75,603	145,291

ESTIMATED COSTS OF DRILLING AND EQUIPPING WELLS, BY DEPTH INTERVALS - 1988

TEXAS RRC DIST. 2

Table 37

	DEPTH INTERVAL (FEET)	TOTAL NUMBER OF WELLS, FOOTAGE DRILLED, AND COSTS				AVERAGE DEPTH AND COST PER WELL			
		OIL WELLS	GAS WELLS	DRY HOLES	TOTAL	OIL	GAS	DRY	TOTAL
WELLS		7	1	10	18				
FOOTAGE	0 - 1,249	7,667	661	10,097	18,425	1,095	661	1,010	1,024
COSTS $		151,288	23,135	170,218	344,641	21,613	23,135	17,022	19,147
WELLS		3	8	14	25				
FOOTAGE	1,250 - 2,499	6,456	16,724	23,971	47,151	2,152	2,091	1,712	1,886
COSTS $		131,969	436,175	410,952	979,096	43,990	54,522	29,354	39,164
WELLS		11	15	22	48				
FOOTAGE	2,500 - 3,749	33,715	49,437	67,879	151,031	3,065	3,296	3,085	3,146
COSTS $		841,586	1,399,793	1,223,850	3,465,229	76,508	93,320	55,630	72,192
WELLS		3	21	33	57				
FOOTAGE	3,750 - 4,999	12,662	87,598	142,165	242,425	4,221	4,171	4,308	4,253
COSTS $		439,653	2,207,264	2,866,963	5,513,880	146,551	105,108	86,878	96,735
WELLS		20	28	53	101				
FOOTAGE	5,000 - 7,499	118,385	164,995	303,412	586,792	5,919	5,893	5,725	5,810
COSTS $		3,057,780	5,358,293	6,449,095	14,865,168	152,889	191,368	121,681	147,180
WELLS		15	46	39	100				
FOOTAGE	7,500 - 9,999	133,856	399,000	339,691	872,547	8,924	8,674	8,710	8,725
COSTS $		5,998,966	23,561,436	13,706,189	43,266,591	399,931	512,205	351,441	432,666
WELLS		1	12	16	29				
FOOTAGE	10,000 - 12,499	11,520	131,058	175,613	318,191	11,520	10,922	10,976	10,972
COSTS $		633,275	13,064,470	9,917,047	23,614,792	633,275	1,088,706	619,815	814,303
WELLS		--	12	7	19				
FOOTAGE	12,500 - 14,999	--	165,164	93,408	263,572	--	13,764	14,058	13,872
COSTS $		--	31,270,622	11,813,304	43,083,926	--	2,605,885	1,687,615	2,267,575
WELLS		--	3	2	5				
FOOTAGE	15,000 - 17,499	--	48,009	32,620	80,629	--	16,003	16,310	16,126
COSTS $		--	13,895,767	6,112,230	20,007,997	--	4,631,923	3,056,115	4,001,600
WELLS		--	--	2	2				
FOOTAGE	17,500 - 19,999	--	--	35,595	35,595	--	--	17,798	17,798
COSTS $		--	--	9,681,494	9,681,494	--	--	4,840,747	4,840,747
WELLS		--	--	--	--				
FOOTAGE	20,000 & OVER	--	--	--	--	--	--	--	--
COSTS $		--	--	--	--	--	--	--	--
TOTAL WELLS		60	146	198	404				
TOTAL FOOTAGE		324,261	1,062,646	1,229,451	2,616,358	5,404	7,278	6,209	6,476
TOTAL COSTS $		11,254,517	91,216,955	62,351,342	164,822,814	187,575	624,774	314,906	407,977

ESTIMATED COSTS OF DRILLING AND EQUIPPING WELLS, BY DEPTH INTERVALS - 1988

TEXAS RRC DIST. 3

Table 38

DEPTH INTERVAL (FEET)		TOTAL NUMBER OF WELLS, FOOTAGE DRILLED, AND COSTS				AVERAGE DEPTH AND COST PER WELL			
		OIL WELLS	GAS WELLS	DRY HOLES	TOTAL	OIL	GAS	DRY	TOTAL
WELLS		10	2	9	21				
FOOTAGE	0 - 1,249	8,141	1,988	5,513	15,642	814	994	613	745
COSTS $		306,614	72,146	218,006	596,766	30,661	36,073	24,223	28,417
WELLS		10	6	6	22				
FOOTAGE	1,250 - 2,499	19,724	12,476	11,085	43,285	1,972	2,079	1,848	1,968
COSTS $		845,556	431,509	232,101	1,509,166	84,556	71,918	38,684	68,598
WELLS		19	5	19	43				
FOOTAGE	2,500 - 3,749	63,068	14,205	58,852	136,125	3,319	2,841	3,097	3,166
COSTS $		3,048,499	556,017	1,602,671	5,207,187	160,447	111,203	84,351	121,097
WELLS		19	15	22	56				
FOOTAGE	3,750 - 4,999	82,423	69,914	96,840	249,177	4,338	4,661	4,402	4,450
COSTS $		3,988,685	2,763,241	2,754,591	9,506,517	209,931	184,216	125,209	169,759
WELLS		137	21	75	233				
FOOTAGE	5,000 - 7,499	815,195	132,661	461,069	1,408,925	5,950	6,317	6,148	6,047
COSTS $		43,497,198	5,978,504	16,613,202	66,088,904	317,498	284,691	221,509	283,643
WELLS		71	42	79	192				
FOOTAGE	7,500 - 9,999	614,457	363,584	693,607	1,671,648	8,654	8,657	8,780	8,707
COSTS $		42,618,285	25,103,550	28,711,573	96,433,408	600,258	597,704	363,438	502,257
WELLS		15	45	51	111				
FOOTAGE	10,000 - 12,499	162,703	502,513	565,787	1,231,003	10,847	11,167	11,094	11,090
COSTS $		14,092,804	47,638,737	35,009,067	96,740,608	939,520	1,058,639	686,452	871,537
WELLS		2	10	15	27				
FOOTAGE	12,500 - 14,999	25,822	130,601	201,790	358,213	12,911	13,060	13,453	13,267
COSTS $		3,576,924	17,201,053	19,566,344	40,344,321	1,788,462	1,720,105	1,304,423	1,494,234
WELLS		--	2	7	9				
FOOTAGE	15,000 - 17,499	--	31,995	115,164	147,159	--	15,998	16,452	16,351
COSTS $		--	5,846,064	13,840,244	19,686,308	--	2,923,032	1,977,178	2,187,368
WELLS		--	--	2	2				
FOOTAGE	17,500 - 19,999	--	--	35,983	35,983	--	--	17,992	17,992
COSTS $		--	--	8,767,496	8,767,496	--	--	4,383,748	4,383,748
WELLS		--	--	--	--				
FOOTAGE	20,000 & OVER	--	--	--	--	--	--	--	--
COSTS $		--	--	--	--	--	--	--	--
TOTAL WELLS		283	148	285	716				
TOTAL FOOTAGE		1,791,533	1,259,937	2,245,690	5,297,160	6,331	8,513	7,880	7,398
TOTAL COSTS $		111,974,565	105,590,821	127,315,295	344,880,681	395,670	713,452	446,720	481,677

ESTIMATED COSTS OF DRILLING AND EQUIPPING WELLS, BY DEPTH INTERVALS - 1988

TEXAS RRC DIST. 4

Table 39

DEPTH INTERVAL (FEET)		TOTAL NUMBER OF WELLS, FOOTAGE DRILLED, AND COSTS				AVERAGE DEPTH AND COST PER WELL			
		OIL WELLS	GAS WELLS	DRY HOLES	TOTAL	OIL	GAS	DRY	TOTAL
WELLS		--	2	4	6				
FOOTAGE	0 - 1,249	--	1,980	1,860	3,840	--	990	465	640
COSTS $		--	26,680	68,496	95,176	--	13,340	17,124	15,863
WELLS		8	7	13	28				
FOOTAGE	1,250 - 2,499	13,312	13,562	23,818	50,692	1,664	1,937	1,832	1,810
COSTS $		476,260	260,875	420,404	1,157,539	59,533	37,268	32,339	41,341
WELLS		15	4	19	38				
FOOTAGE	2,500 - 3,749	50,458	14,206	61,033	125,697	3,364	3,552	3,212	3,308
COSTS $		2,019,349	326,988	1,035,149	3,381,486	134,623	81,747	54,482	88,986
WELLS		11	7	19	37				
FOOTAGE	3,750 - 4,999	46,336	32,455	82,749	161,540	4,212	4,636	4,355	4,366
COSTS $		1,835,382	1,048,690	1,901,354	4,785,426	166,853	149,813	100,071	129,336
WELLS		52	76	82	210				
FOOTAGE	5,000 - 7,499	315,391	487,032	517,056	1,319,479	6,065	6,408	6,306	6,283
COSTS $		11,434,161	21,514,739	14,925,204	47,874,104	219,888	283,089	182,015	227,972
WELLS		36	176	82	294				
FOOTAGE	7,500 - 9,999	290,584	1,500,863	701,490	2,492,937	8,072	8,528	8,555	8,479
COSTS $		14,300,986	101,816,228	33,736,905	149,854,119	397,250	578,501	411,426	509,708
WELLS		--	81	25	106				
FOOTAGE	10,000 - 12,499	--	883,418	269,829	1,153,247	--	10,906	10,793	10,880
COSTS $		--	104,531,341	20,709,257	125,240,598	--	1,290,510	828,370	1,181,515
WELLS		--	43	8	51				
FOOTAGE	12,500 - 14,999	--	597,019	107,525	704,544	--	13,884	13,441	13,815
COSTS $		--	111,328,265	13,259,417	124,587,682	--	2,589,030	1,657,427	2,442,896
WELLS		--	9	8	17				
FOOTAGE	15,000 - 17,499	--	140,052	126,179	266,231	--	15,561	15,772	15,661
COSTS $		--	32,566,437	23,040,319	55,606,756	--	3,618,493	2,880,040	3,270,986
WELLS		--	--	1	1				
FOOTAGE	17,500 - 19,999	--	--	18,018	18,018	--	--	18,018	18,018
COSTS $		--	--	5,736,109	5,736,109	--	--	5,736,109	5,736,109
WELLS		--	--	--	--				
FOOTAGE	20,000 & OVER	--	--	--	--	--	--	--	--
COSTS $		--	--	--	--	--	--	--	--
TOTAL WELLS		122	405	261	788				
TOTAL FOOTAGE		716,081	3,670,587	1,909,557	6,296,225	5,870	9,063	7,316	7,990
TOTAL COSTS $		30,066,138	373,420,243	114,832,614	518,318,995	246,444	922,025	439,972	657,765

ESTIMATED COSTS OF DRILLING AND EQUIPPING WELLS, BY DEPTH INTERVALS - 1988

TEXAS RRC DIST. 5

Table 40

DEPTH INTERVAL (FEET)		TOTAL NUMBER OF WELLS, FOOTAGE DRILLED, AND COSTS				AVERAGE DEPTH AND COST PER WELL			
		OIL WELLS	GAS WELLS	DRY HOLES	TOTAL	OIL	GAS	DRY	TOTAL
WELLS		32	--	9	41				
FOOTAGE	0 - 1,249	28,994	--	7,408	36,402	906	--	823	888
COSTS $		405,403	--	116,775	522,178	12,669	--	12,975	12,736
WELLS		19	2	2	23				
FOOTAGE	1,250 - 2,499	41,345	4,117	3,674	49,136	2,176	2,059	1,837	2,136
COSTS $		2,749,226	118,468	77,031	2,944,725	144,696	59,234	38,516	128,032
WELLS		19	--	18	37				
FOOTAGE	2,500 - 3,749	56,584	--	60,352	116,936	2,978	--	3,353	3,160
COSTS $		3,603,146	--	1,789,180	5,392,326	189,639	--	99,399	145,739
WELLS		--	--	8	8				
FOOTAGE	3,750 - 4,999	--	--	33,321	33,321	--	--	4,165	4,165
COSTS $		--	--	661,340	661,340	--	--	82,668	82,668
WELLS		3	--	11	14				
FOOTAGE	5,000 - 7,499	17,841	--	68,781	86,622	5,947	--	6,253	6,187
COSTS $		666,237	--	1,650,567	2,316,804	222,079	--	150,052	165,486
WELLS		18	15	32	65				
FOOTAGE	7,500 - 9,999	164,710	138,129	289,042	591,881	9,151	9,209	9,033	9,106
COSTS $		7,490,405	7,590,351	9,693,655	24,774,411	416,134	506,023	302,927	381,145
WELLS		7	12	7	26				
FOOTAGE	10,000 - 12,499	72,276	135,326	77,607	285,209	10,325	11,277	11,087	10,970
COSTS $		2,436,596	12,296,816	4,517,208	19,250,620	348,085	1,024,735	645,315	740,408
WELLS		--	4	3	7				
FOOTAGE	12,500 - 14,999	--	53,365	42,741	96,106	--	13,341	14,247	13,729
COSTS $		--	6,305,448	6,750,449	13,055,897	--	1,576,362	2,250,150	1,865,128
WELLS		--	--	--	--				
FOOTAGE	15,000 - 17,499	--	--	--	--	--	--	--	--
COSTS $		--	--	--	--	--	--	--	--
WELLS		--	--	--	--				
FOOTAGE	17,500 - 19,999	--	--	--	--	--	--	--	--
COSTS $		--	--	--	--	--	--	--	--
WELLS		--	--	--	--				
FOOTAGE	20,000 & OVER	--	--	--	--	--	--	--	--
COSTS $		--	--	--	--	--	--	--	--
TOTAL WELLS		98	33	90	221				
TOTAL FOOTAGE		381,750	330,937	582,936	1,295,613	3,895	10,028	6,477	5,863
TOTAL COSTS $		17,351,013	26,311,083	25,256,205	68,918,301	177,051	797,306	280,625	311,948

ESTIMATED COSTS OF DRILLING AND EQUIPPING WELLS, BY DEPTH INTERVALS - 1988

TEXAS RRC DIST. 6

Table 41

DEPTH INTERVAL (FEET)		TOTAL NUMBER OF WELLS, FOOTAGE DRILLED, AND COSTS				AVERAGE DEPTH AND COST PER WELL			
		OIL WELLS	GAS WELLS	DRY HOLES	TOTAL	OIL	GAS	DRY	TOTAL
WELLS		16	--	2	18				
FOOTAGE	0 - 1,249	7,046	--	1,750	8,796	440	--	875	489
COSTS $		303,790	--	49,225	353,015	18,987	--	24,613	19,612
WELLS		7	2	9	18				
FOOTAGE	1,250 - 2,499	12,753	4,914	15,992	33,659	1,822	2,457	1,777	1,870
COSTS $		561,558	110,035	383,941	1,055,534	80,223	55,018	42,660	58,641
WELLS		8	1	1	10				
FOOTAGE	2,500 - 3,749	29,169	2,650	3,565	35,384	3,646	2,650	3,565	3,538
COSTS $		1,451,305	67,929	150,367	1,669,601	181,413	67,929	150,367	166,960
WELLS		38	4	13	55				
FOOTAGE	3,750 - 4,999	173,456	16,935	58,141	248,532	4,565	4,234	4,472	4,519
COSTS $		8,829,251	741,120	2,282,142	11,852,513	232,349	185,280	175,549	215,500
WELLS		62	38	58	158				
FOOTAGE	5,000 - 7,499	388,450	248,641	358,645	995,736	6,265	6,543	6,184	6,302
COSTS $		21,731,436	12,688,102	11,147,818	45,567,356	350,507	333,897	192,204	288,401
WELLS		29	83	35	147				
FOOTAGE	7,500 - 9,999	237,581	749,872	293,302	1,280,755	8,192	9,035	8,380	8,713
COSTS $		14,735,584	60,080,882	9,576,591	84,393,057	508,124	723,866	273,617	574,102
WELLS		7	59	10	76				
FOOTAGE	10,000 - 12,499	73,383	654,147	107,864	835,394	10,483	11,087	10,786	10,992
COSTS $		5,540,947	62,828,313	4,944,819	73,314,079	791,564	1,064,887	494,482	964,659
WELLS		--	2	2	4				
FOOTAGE	12,500 - 14,999	--	26,350	26,614	52,964	--	13,175	13,307	13,241
COSTS $		--	3,274,268	1,729,572	5,003,840	--	1,637,134	864,786	1,250,960
WELLS		--	--	2	2				
FOOTAGE	15,000 - 17,499	--	--	30,960	30,960	--	--	15,480	15,480
COSTS $		--	--	2,706,613	2,706,613	--	--	1,353,307	1,353,307
WELLS		--	--	--	--				
FOOTAGE	17,500 - 19,999	--	--	--	--	--	--	--	--
COSTS $		--	--	--	--	--	--	--	--
WELLS		--	--	--	--				
FOOTAGE	20,000 & OVER	--	--	--	--	--	--	--	--
COSTS $		--	--	--	--	--	--	--	--
TOTAL WELLS		167	189	132	488				
TOTAL FOOTAGE		921,838	1,703,509	896,833	3,522,180	5,520	9,013	6,794	7,218
TOTAL COSTS $		53,153,871	139,790,649	32,971,088	225,915,608	318,287	739,633	249,781	462,942

ESTIMATED COSTS OF DRILLING AND EQUIPPING WELLS, BY DEPTH INTERVALS - 1988

TEXAS RRC DIST. 7B

Table 42

DEPTH INTERVAL (FEET)		TOTAL NUMBER OF WELLS, FOOTAGE DRILLED, AND COSTS				AVERAGE DEPTH AND COST PER WELL			
		OIL WELLS	GAS WELLS	DRY HOLES	TOTAL	OIL	GAS	DRY	TOTAL
WELLS		66	32	89	187				
FOOTAGE	0 - 1,249	51,466	28,202	66,360	146,028	780	881	746	781
COSTS $		1,211,165	763,424	849,415	2,824,004	18,351	23,857	9,544	15,102
WELLS		142	12	118	272				
FOOTAGE	1,250 - 2,499	231,452	22,396	223,395	477,243	1,630	1,866	1,893	1,755
COSTS $		5,645,465	631,367	2,817,130	9,093,962	39,757	52,614	23,874	33,434
WELLS		141	67	115	323				
FOOTAGE	2,500 - 3,749	455,002	224,202	367,647	1,046,851	3,227	3,346	3,197	3,241
COSTS $		13,121,389	6,947,412	4,915,013	24,983,814	93,060	103,693	42,739	77,349
WELLS		177	94	149	420				
FOOTAGE	3,750 - 4,999	771,087	396,614	652,314	1,820,015	4,356	4,219	4,378	4,333
COSTS $		22,228,194	12,673,711	9,887,932	44,789,837	125,583	134,827	66,362	106,642
WELLS		72	11	76	159				
FOOTAGE	5,000 - 7,499	407,249	61,637	440,474	909,360	5,656	5,603	5,796	5,719
COSTS $		13,835,696	2,034,461	7,392,191	23,262,348	192,162	184,951	97,266	146,304
WELLS		--	--	--	--				
FOOTAGE	7,500 - 9,999	--	--	--	--	--	--	--	--
COSTS $		--	--	--	--	--	--	--	--
WELLS		--	--	--	--				
FOOTAGE	10,000 - 12,499	--	--	--	--	--	--	--	--
COSTS $		--	--	--	--	--	--	--	--
WELLS		--	--	--	--				
FOOTAGE	12,500 - 14,999	--	--	--	--	--	--	--	--
COSTS $		--	--	--	--	--	--	--	--
WELLS		--	--	1	1				
FOOTAGE	15,000 - 17,499	--	--	16,000	16,000	--	--	16,000	16,000
COSTS $		--	--	3,084,755	3,084,755	--	--	3,084,755	3,084,755
WELLS		--	--	--	--				
FOOTAGE	17,500 - 19,999	--	--	--	--	--	--	--	--
COSTS $		--	--	--	--	--	--	--	--
WELLS		--	--	--	--				
FOOTAGE	20,000 & OVER	--	--	--	--	--	--	--	--
COSTS $		--	--	--	--	--	--	--	--
TOTAL WELLS		598	216	548	1,362				
TOTAL FOOTAGE		1,916,256	733,051	1,766,190	4,415,497	3,204	3,394	3,223	3,242
TOTAL COSTS $		56,041,909	23,050,375	28,946,436	108,038,720	93,716	106,715	52,822	79,324

ESTIMATED COSTS OF DRILLING AND EQUIPPING WELLS, BY DEPTH INTERVALS - 1988

TEXAS RRC DIST. 7C

Table 43

	DEPTH INTERVAL (FEET)	TOTAL NUMBER OF WELLS, FOOTAGE DRILLED, AND COSTS				AVERAGE DEPTH AND COST PER WELL			
		OIL WELLS	GAS WELLS	DRY HOLES	TOTAL	OIL	GAS	DRY	TOTAL
WELLS		19	2	17	38				
FOOTAGE	0 - 1,249	17,542	1,676	12,082	31,300	923	838	711	824
COSTS $		622,256	59,500	254,691	936,447	32,750	29,750	14,982	24,643
WELLS		27	4	26	57				
FOOTAGE	1,250 - 2,499	51,846	6,560	52,143	110,549	1,920	1,640	2,006	1,939
COSTS $		2,655,596	262,015	1,577,432	4,495,043	98,355	65,504	60,670	78,860
WELLS		48	4	27	79				
FOOTAGE	2,500 - 3,749	146,399	13,108	84,131	243,638	3,050	3,277	3,116	3,084
COSTS $		7,095,848	516,482	2,530,760	10,143,090	147,830	129,121	93,732	128,394
WELLS		41	7	43	91				
FOOTAGE	3,750 - 4,999	179,768	28,996	184,235	392,999	4,385	4,142	4,285	4,319
COSTS $		7,262,642	976,325	5,584,354	13,823,321	177,138	139,475	129,869	151,905
WELLS		39	58	47	144				
FOOTAGE	5,000 - 7,499	243,419	374,223	290,296	907,938	6,242	6,452	6,177	6,305
COSTS $		10,766,455	14,115,084	7,610,245	32,491,784	276,063	243,364	161,920	225,637
WELLS		154	42	22	218				
FOOTAGE	7,500 - 9,999	1,278,943	374,266	184,389	1,837,598	8,305	8,911	8,381	8,429
COSTS $		52,743,778	14,070,603	6,637,917	73,452,298	342,492	335,014	301,724	336,937
WELLS		12	2	9	23				
FOOTAGE	10,000 - 12,499	132,466	22,845	98,210	253,521	11,039	11,423	10,912	11,023
COSTS $		7,585,141	1,303,178	5,857,055	14,745,374	632,095	651,589	650,784	641,103
WELLS		2	1	2	5				
FOOTAGE	12,500 - 14,999	25,814	14,884	27,880	68,578	12,907	14,884	13,940	13,716
COSTS $		3,060,750	1,518,683	2,542,179	7,121,612	1,530,375	1,518,683	1,271,090	1,424,322
WELLS		--	--	--	--				
FOOTAGE	15,000 - 17,499	--	--	--	--	--	--	--	--
COSTS $		--	--	--	--	--	--	--	--
WELLS		--	--	--	--				
FOOTAGE	17,500 - 19,999	--	--	--	--	--	--	--	--
COSTS $		--	--	--	--	--	--	--	--
WELLS		--	--	--	--				
FOOTAGE	20,000 & OVER	--	--	--	--	--	--	--	--
COSTS $		--	--	--	--	--	--	--	--
TOTAL WELLS		342	120	193	655				
TOTAL FOOTAGE		2,076,197	836,558	933,366	3,846,121	6,071	6,971	4,836	5,872
TOTAL COSTS $		91,792,466	32,821,870	32,594,633	157,208,969	268,399	273,516	168,884	240,014

ESTIMATED COSTS OF DRILLING AND EQUIPPING WELLS, BY DEPTH INTERVALS - 1988

TEXAS RRC DIST. 8

Table 44

DEPTH INTERVAL (FEET)		TOTAL NUMBER OF WELLS, FOOTAGE DRILLED, AND COSTS				AVERAGE DEPTH AND COST PER WELL			
		OIL WELLS	GAS WELLS	DRY HOLES	TOTAL	OIL	GAS	DRY	TOTAL
WELLS		2	--	2	4				
FOOTAGE	0 - 1,249	2,458	--	1,860	4,318	1,229	--	930	1,080
COSTS $		529,782	--	122,777	652,559	264,891	--	61,389	163,140
WELLS		65	--	11	76				
FOOTAGE	1,250 - 2,499	108,016	--	20,211	128,227	1,662	--	1,837	1,687
COSTS $		11,361,914	--	1,749,054	13,110,968	174,799	--	159,005	172,513
WELLS		201	28	16	245				
FOOTAGE	2,500 - 3,749	616,794	82,075	51,122	749,991	3,069	2,931	3,195	3,061
COSTS $		31,446,525	5,224,572	3,189,627	39,860,724	156,450	186,592	199,352	162,697
WELLS		237	--	24	261				
FOOTAGE	3,750 - 4,999	1,067,496	--	106,001	1,173,497	4,504	--	4,417	4,496
COSTS $		45,677,048	--	4,317,307	49,994,355	192,730	--	179,888	191,549
WELLS		218	4	28	250				
FOOTAGE	5,000 - 7,499	1,404,920	23,848	168,262	1,597,030	6,445	5,962	6,009	6,388
COSTS $		61,798,702	2,841,588	6,578,961	71,219,251	283,480	710,397	234,963	284,877
WELLS		369	12	53	434				
FOOTAGE	7,500 - 9,999	3,283,584	95,323	452,358	3,831,265	8,899	7,944	8,535	8,828
COSTS $		174,363,778	4,603,486	19,364,163	198,331,427	472,531	383,624	365,362	456,985
WELLS		45	6	26	77				
FOOTAGE	10,000 - 12,499	498,881	64,655	282,118	845,654	11,086	10,776	10,851	10,983
COSTS $		35,980,474	4,564,756	12,629,208	53,174,438	799,566	760,793	485,739	690,577
WELLS		12	--	3	15				
FOOTAGE	12,500 - 14,999	158,330	--	39,663	197,993	13,194	--	13,221	13,200
COSTS $		12,923,089	--	5,431,584	18,354,673	1,076,924	--	1,810,528	1,223,645
WELLS		--	3	1	4				
FOOTAGE	15,000 - 17,499	--	48,016	15,871	63,887	--	16,005	15,871	15,972
COSTS $		--	12,914,350	2,248,824	15,163,174	--	4,304,784	2,248,824	3,790,794
WELLS		--	--	--	--				
FOOTAGE	17,500 - 19,999	--	--	--	--	--	--	--	--
COSTS $		--	--	--	--	--	--	--	--
WELLS		--	1	--	1				
FOOTAGE	20,000 & OVER	--	21,600	--	21,600	--	21,600	--	21,600
COSTS $		--	5,206,222	--	5,206,222	--	5,206,222	--	5,206,222
TOTAL WELLS		1,149	54	164	1,367				
TOTAL FOOTAGE		7,140,479	335,517	1,137,466	8,613,462	6,215	6,213	6,936	6,301
TOTAL COSTS $		374,081,312	35,354,974	55,631,505	465,067,791	325,571	654,722	339,217	340,211

ESTIMATED COSTS OF DRILLING AND EQUIPPING WELLS, BY DEPTH INTERVALS - 1988

TEXAS RRC DIST. 8A

Table 45

DEPTH INTERVAL (FEET)		TOTAL NUMBER OF WELLS, FOOTAGE DRILLED, AND COSTS				AVERAGE DEPTH AND COST PER WELL			
		OIL WELLS	GAS WELLS	DRY HOLES	TOTAL	OIL	GAS	DRY	TOTAL
WELLS		--	--	1	1				
FOOTAGE	0 - 1,249	--	--	254	254	--	--	254	254
COSTS $		--	--	14,441	14,441	--	--	14,441	14,441
WELLS		11	--	3	14				
FOOTAGE	1,250 - 2,499	19,893	--	4,779	24,672	1,808	--	1,593	1,762
COSTS $		1,053,103	--	471,029	1,524,132	95,737	--	157,010	108,867
WELLS		31	1	17	49				
FOOTAGE	2,500 - 3,749	100,998	3,550	55,506	160,054	3,258	3,550	3,265	3,266
COSTS $		3,801,789	92,149	1,303,064	5,197,002	122,638	92,149	76,651	106,061
WELLS		238	--	45	283				
FOOTAGE	3,750 - 4,999	1,145,110	--	194,910	1,340,020	4,811	--	4,331	4,735
COSTS $		37,431,291	--	4,201,495	41,632,786	157,274	--	93,367	147,112
WELLS		279	1	75	355				
FOOTAGE	5,000 - 7,499	1,746,714	7,110	458,021	2,211,845	6,261	7,110	6,107	6,231
COSTS $		78,227,062	244,764	11,802,925	90,274,751	280,384	244,764	157,372	254,295
WELLS		99	1	48	148				
FOOTAGE	7,500 - 9,999	800,169	7,700	409,150	1,217,019	8,083	7,700	8,524	8,223
COSTS $		38,825,647	306,268	13,321,569	52,453,484	392,178	306,268	277,533	354,415
WELLS		17	--	18	35				
FOOTAGE	10,000 - 12,499	198,184	--	200,384	398,568	11,658	--	11,132	11,388
COSTS $		12,458,990	--	7,197,437	19,656,427	732,882	--	399,858	561,612
WELLS		8	--	10	18				
FOOTAGE	12,500 - 14,999	103,695	--	128,571	232,266	12,962	--	12,857	12,904
COSTS $		6,798,554	--	5,818,545	12,617,099	849,819	--	581,855	700,950
WELLS		--	--	--	--				
FOOTAGE	15,000 - 17,499	--	--	--	--	--	--	--	--
COSTS $		--	--	--	--	--	--	--	--
WELLS		--	--	--	--				
FOOTAGE	17,500 - 19,999	--	--	--	--	--	--	--	--
COSTS $		--	--	--	--	--	--	--	--
WELLS		--	--	--	--				
FOOTAGE	20,000 & OVER	--	--	--	--	--	--	--	--
COSTS $		--	--	--	--	--	--	--	--
TOTAL WELLS		683	3	217	903				
TOTAL FOOTAGE		4,114,763	18,360	1,451,575	5,584,698	6,025	6,120	6,689	6,185
TOTAL COSTS $		178,596,436	643,181	44,130,505	223,370,122	261,488	214,394	203,366	247,364

ESTIMATED COSTS OF DRILLING AND EQUIPPING WELLS, BY DEPTH INTERVALS - 1988

TEXAS RRC DIST. 9

Table 46

	DEPTH INTERVAL (FEET)	TOTAL NUMBER OF WELLS, FOOTAGE DRILLED, AND COSTS				AVERAGE DEPTH AND COST PER WELL			
		OIL WELLS	GAS WELLS	DRY HOLES	TOTAL	OIL	GAS	DRY	TOTAL
WELLS		96	4	83	183				
FOOTAGE	0 - 1,249	75,829	2,178	65,048	143,055	790	545	784	782
COSTS $		1,137,135	50,056	534,431	1,721,622	11,845	12,514	6,439	9,408
WELLS		171	1	111	283				
FOOTAGE	1,250 - 2,499	304,154	2,051	197,567	503,772	1,779	2,051	1,780	1,780
COSTS $		6,208,983	45,593	1,848,856	8,103,432	36,310	45,593	16,656	28,634
WELLS		28	--	34	62				
FOOTAGE	2,500 - 3,749	87,168	--	107,488	194,656	3,113	--	3,161	3,140
COSTS $		2,326,549	--	1,372,418	3,698,967	83,091	--	40,365	59,661
WELLS		142	20	56	218				
FOOTAGE	3,750 - 4,999	640,724	90,770	254,057	985,551	4,512	4,539	4,537	4,521
COSTS $		18,491,936	2,633,602	4,207,853	25,333,391	130,225	131,680	75,140	116,208
WELLS		98	45	91	234				
FOOTAGE	5,000 - 7,499	557,344	269,003	526,787	1,353,134	5,687	5,978	5,789	5,783
COSTS $		20,480,506	12,278,692	9,439,622	42,198,820	208,985	272,860	103,732	180,337
WELLS		12	13	35	60				
FOOTAGE	7,500 - 9,999	99,310	103,039	296,983	499,332	8,276	7,926	8,485	8,322
COSTS $		4,706,790	7,114,403	7,675,964	19,497,157	392,233	547,262	219,313	324,953
WELLS		--	--	1	1				
FOOTAGE	10,000 - 12,499	--	--	10,621	10,621	--	--	10,621	10,621
COSTS $		--	--	331,806	331,806	--	--	331,806	331,806
WELLS		--	--	1	1				
FOOTAGE	12,500 - 14,999	--	--	12,700	12,700	--	--	12,700	12,700
COSTS $		--	--	599,835	599,835	--	--	599,835	599,835
WELLS		--	--	--	--				
FOOTAGE	15,000 - 17,499	--	--	--	--	--	--	--	--
COSTS $		--	--	--	--	--	--	--	--
WELLS		--	--	--	--				
FOOTAGE	17,500 - 19,999	--	--	--	--	--	--	--	--
COSTS $		--	--	--	--	--	--	--	--
WELLS		--	--	--	--				
FOOTAGE	20,000 & OVER	--	--	--	--	--	--	--	--
COSTS $		--	--	--	--	--	--	--	--
TOTAL WELLS		547	83	412	1,042				
TOTAL FOOTAGE		1,764,529	467,041	1,471,251	3,702,821	3,226	5,627	3,571	3,554
TOTAL COSTS $		53,351,899	22,122,346	26,010,785	101,485,030	97,535	266,534	63,133	97,394

ESTIMATED COSTS OF DRILLING AND EQUIPPING WELLS, BY DEPTH INTERVALS - 1988

TEXAS RRC DIST. 10

Table 47

DEPTH INTERVAL (FEET)		TOTAL NUMBER OF WELLS, FOOTAGE DRILLED, AND COSTS				AVERAGE DEPTH AND COST PER WELL			
		OIL WELLS	GAS WELLS	DRY HOLES	TOTAL	OIL	GAS	DRY	TOTAL
0 - 1,249	WELLS	--	--	1	1	--	--	1,152	1,152
	FOOTAGE	--	--	1,152	1,152	--	--	138,700	138,700
	COSTS $	--	--	138,700	138,700				
1,250 - 2,499	WELLS	3	10	2	15	2,444	2,108	1,758	2,128
	FOOTAGE	7,332	21,075	3,516	31,923	97,405	125,085	111,646	117,757
	COSTS $	292,214	1,250,845	223,292	1,766,351				
2,500 - 3,749	WELLS	114	21	9	144	3,311	3,292	3,327	3,310
	FOOTAGE	377,505	69,131	29,945	476,581	148,400	168,439	139,044	150,738
	COSTS $	16,917,643	3,537,220	1,251,400	21,706,263				
3,750 - 4,999	WELLS	7	2	2	11	3,906	4,316	4,275	4,048
	FOOTAGE	27,341	8,632	8,550	44,523	176,798	143,806	158,894	167,544
	COSTS $	1,237,585	287,611	317,788	1,842,984				
5,000 - 7,499	WELLS	31	22	19	72	6,374	6,565	6,731	6,527
	FOOTAGE	197,596	144,426	127,887	469,909	322,134	309,130	257,104	301,000
	COSTS $	9,986,149	6,800,866	4,884,983	21,671,998				
7,500 - 9,999	WELLS	11	34	24	69	8,529	8,399	8,511	8,459
	FOOTAGE	93,818	285,572	204,258	583,648	482,529	410,800	308,394	386,616
	COSTS $	5,307,824	13,967,192	7,401,467	26,676,483				
10,000 - 12,499	WELLS	5	18	13	36	11,414	11,487	11,251	11,391
	FOOTAGE	57,068	206,761	146,262	410,091	784,824	720,972	489,427	646,227
	COSTS $	3,924,118	12,977,494	6,362,556	23,264,168				
12,500 - 14,999	WELLS	1	22	1	24	12,500	13,232	13,450	13,211
	FOOTAGE	12,500	291,110	13,450	317,060	1,445,750	974,205	717,560	983,159
	COSTS $	1,445,750	21,432,505	717,560	23,595,815				
15,000 - 17,499	WELLS	--	5	--	5	--	16,001	--	16,001
	FOOTAGE	--	80,003	--	80,003	--	1,770,794	--	1,770,794
	COSTS $	--	8,853,972	--	8,853,972				
17,500 - 19,999	WELLS	--	--	--	--	--	--	--	--
	FOOTAGE	--	--	--	--	--	--	--	--
	COSTS $	--	--	--	--				
20,000 & OVER	WELLS	--	--	--	--	--	--	--	--
	FOOTAGE	--	--	--	--	--	--	--	--
	COSTS $	--	--	--	--				
TOTAL WELLS		172	134	71	377	4,495	8,259	7,535	6,406
TOTAL FOOTAGE		773,160	1,106,710	535,020	2,414,890	227,391	515,729	299,968	343,546
TOTAL COSTS $		39,111,283	69,107,705	21,297,746	129,516,734				

ESTIMATED COSTS OF DRILLING AND EQUIPPING WELLS, BY DEPTH INTERVALS - 1988

TEXAS - OFFSHORE

Table 48

DEPTH INTERVAL (FEET)		TOTAL NUMBER OF WELLS, FOOTAGE DRILLED, AND COSTS				AVERAGE DEPTH AND COST PER WELL			
		OIL WELLS	GAS WELLS	DRY HOLES	TOTAL	OIL	GAS	DRY	TOTAL
WELLS		--	--	--	--				
FOOTAGE	0 - 1,249	--	--	--	--	--	--	--	--
COSTS $		--	--	--	--	--	--	--	--
WELLS		--	--	1	1				
FOOTAGE	1,250 - 2,499	--	--	1,383	1,383	--	--	1,383	1,383
COSTS $		--	--	681,226	681,226	--	--	681,226	681,226
WELLS		--	--	1	1				
FOOTAGE	2,500 - 3,749	--	--	3,000	3,000	--	--	3,000	3,000
COSTS $		--	--	313,885	313,885	--	--	313,885	313,885
WELLS		--	2	4	6				
FOOTAGE	3,750 - 4,999	--	8,339	17,433	25,772	--	4,170	4,358	4,295
COSTS $		--	1,914,400	3,636,702	5,551,102	--	957,200	909,176	925,184
WELLS		--	3	13	16				
FOOTAGE	5,000 - 7,499	--	20,986	83,464	104,450	--	6,995	6,420	6,528
COSTS $		--	5,585,753	16,438,808	22,024,561	--	1,861,918	1,264,524	1,376,535
WELLS		--	28	28	56				
FOOTAGE	7,500 - 9,999	--	245,551	243,188	488,739	--	8,770	8,685	8,727
COSTS $		--	58,164,591	39,399,066	97,563,657	--	2,077,307	1,407,110	1,742,208
WELLS		3	15	26	44				
FOOTAGE	10,000 - 12,499	34,886	166,559	284,745	486,190	11,629	11,104	10,952	11,050
COSTS $		2,869,882	35,930,333	66,326,583	105,126,798	956,627	2,395,356	2,551,023	2,389,246
WELLS		2	14	19	35				
FOOTAGE	12,500 - 14,999	26,022	185,820	262,370	474,212	13,011	13,273	13,809	13,549
COSTS $		13,464 728	71,906,271	72,256,974	157,627,973	6,732,364	5,136,162	3,802,999	4,503,657
WELLS		--	3	7	10				
FOOTAGE	15,000 - 17,499	--	46,747	113,005	159,752	--	15,582	16,144	15,975
COSTS $		--	18,840,072	42,460,928	61,301,000	--	6,280,024	6,065,847	6,130,100
WELLS		--	--	1	1				
FOOTAGE	17,500 - 19,999	--	--	18,000	18,000	--	--	18,000	18,000
COSTS $		--	--	7,353,026	7,353,026	--	--	7,353,026	7,353,026
WELLS		--	--	--	--				
FOOTAGE	20,000 & OVER	--	--	--	--	--	--	--	--
COSTS $		--	--	--	--	--	--	--	--
TOTAL WELLS		5	65	100	170				
TOTAL FOOTAGE		60,908	674,002	1,026,588	1,761,498	12,182	10,369	10,266	10,362
TOTAL COSTS $		16,334,610	192,341,420	248,867,198	457,543,228	3,266,922	2,959,099	2,488,672	2,691,431

ESTIMATED COSTS OF DRILLING AND EQUIPPING WELLS, BY DEPTH INTERVALS - 1988

UTAH

Table 49

	DEPTH INTERVAL (FEET)	TOTAL NUMBER OF WELLS, FOOTAGE DRILLED, AND COSTS				AVERAGE DEPTH AND COST PER WELL			
		OIL WELLS	GAS WELLS	DRY HOLES	TOTAL	OIL	GAS	DRY	TOTAL
WELLS		10	1	4	15				
FOOTAGE	0 - 1,249	4,163	1,160	2,461	7,784	416	1,160	615	519
COSTS $		152,786	42,924	348,573	544,283	15,279	42,924	87,143	36,286
WELLS		--	3	4	7				
FOOTAGE	1,250 - 2,499	--	5,230	6,933	12,163	--	1,743	1,733	1,738
COSTS $		--	197,209	596,533	793,742	--	65,736	149,133	113,392
WELLS		--	2	4	6				
FOOTAGE	2,500 - 3,749	--	6,444	12,250	18,694	--	3,222	3,063	3,116
COSTS $		--	307,000	1,355,409	1,662,409	--	153,500	338,852	277,068
WELLS		1	4	3	8				
FOOTAGE	3,750 - 4,999	4,100	16,802	13,700	34,602	4,100	4,201	4,567	4,325
COSTS $		236,129	823,418	817,203	1,876,750	236,129	205,855	272,401	234,594
WELLS		31	9	23	63				
FOOTAGE	5,000 - 7,499	189,612	55,575	141,112	386,299	6,117	6,175	6,135	6,132
COSTS $		13,203,315	2,659,727	6,986,260	22,849,302	425,913	295,525	303,750	362,687
WELLS		8	2	1	11				
FOOTAGE	7,500 - 9,999	68,804	18,480	7,520	94,804	8,601	9,240	7,520	8,619
COSTS $		6,519,380	1,922,000	331,960	8,773,340	814,923	961,000	331,960	797,576
WELLS		3	--	1	4				
FOOTAGE	10,000 - 12,499	32,884	--	11,097	43,981	10,961	--	11,097	10,995
COSTS $		4,218,290	--	1,487,475	5,705,765	1,406,097	--	1,487,475	1,426,441
WELLS		3	2	--	5				
FOOTAGE	12,500 - 14,999	41,577	28,065	--	69,642	13,859	14,033	--	13,928
COSTS $		6,803,148	6,662,070	--	13,465,218	2,267,716	3,331,035	--	2,693,044
WELLS		2	--	1	3				
FOOTAGE	15,000 - 17,499	30,426	--	16,000	46,426	15,213	--	16,000	15,475
COSTS $		4,950,954	--	3,840,000	8,790,954	2,475,477	--	3,840,000	2,930,318
WELLS		--	--	--	--				
FOOTAGE	17,500 - 19,999	--	--	--	--	--	--	--	--
COSTS $		--	--	--	--	--	--	--	--
WELLS		--	--	--	--				
FOOTAGE	20,000 & OVER	--	--	--	--	--	--	--	--
COSTS $		--	--	--	--	--	--	--	--
TOTAL WELLS		58	23	41	122				
TOTAL FOOTAGE		371,566	131,756	211,073	714,395	6,406	5,729	5,148	5,856
TOTAL COSTS $		36,084,002	12,614,348	15,763,413	64,461,763	622,138	548,450	384,474	528,375

ESTIMATED COSTS OF DRILLING AND EQUIPPING WELLS, BY DEPTH INTERVALS - 1988

WYOMING

Table 50

	DEPTH INTERVAL (FEET)	TOTAL NUMBER OF WELLS, FOOTAGE DRILLED, AND COSTS				AVERAGE DEPTH AND COST PER WELL			
		OIL WELLS	GAS WELLS	DRY HOLES	TOTAL	OIL	GAS	DRY	TOTAL
WELLS		20	13	12	45				
FOOTAGE	0 - 1,249	16,421	7,268	9,213	32,902	821	559	768	731
COSTS $		810,838	256,206	383,930	1,450,974	40,542	19,708	31,994	32,244
WELLS		59	3	20	82				
FOOTAGE	1,250 - 2,499	116,442	5,355	38,259	160,056	1,974	1,785	1,913	1,952
COSTS $		4,574,944	227,760	1,918,970	6,721,674	77,541	75,920	95,949	81,972
WELLS		12	3	18	33				
FOOTAGE	2,500 - 3,749	35,812	7,682	54,761	98,255	2,984	2,561	3,042	2,977
COSTS $		1,848,995	286,749	2,647,080	4,782,824	154,083	95,583	147,060	144,934
WELLS		38	4	10	52				
FOOTAGE	3,750 - 4,999	171,951	16,414	44,143	232,508	4,525	4,104	4,414	4,471
COSTS $		11,513,621	1,284,523	1,371,802	14,169,946	302,990	321,131	137,180	272,499
WELLS		62	6	81	149				
FOOTAGE	5,000 - 7,499	410,181	37,846	546,168	994,195	6,616	6,308	6,743	6,672
COSTS $		30,682,215	2,634,007	13,237,873	46,554,095	494,874	439,001	163,431	312,444
WELLS		40	26	130	196				
FOOTAGE	7,500 - 9,999	346,990	232,840	1,111,115	1,690,945	8,675	8,955	8,547	8,627
COSTS $		21,718,961	20,113,974	28,049,417	69,882,352	542,974	773,614	215,765	356,543
WELLS		33	17	71	121				
FOOTAGE	10,000 - 12,499	359,463	189,205	774,270	1,322,938	10,893	11,130	10,905	10,933
COSTS $		22,313,116	22,613,470	26,188,419	71,115,005	676,155	1,330,204	368,851	587,727
WELLS		16	1	22	39				
FOOTAGE	12,500 - 14,999	218,669	13,800	300,314	532,783	13,667	13,800	13,651	13,661
COSTS $		33,448,425	1,998,120	24,361,941	59,808,486	2,090,527	1,998,120	1,107,361	1,533,551
WELLS		5	--	5	10				
FOOTAGE	15,000 - 17,499	78,658	--	78,188	156,846	15,732	--	15,638	15,685
COSTS $		9,650,994	--	12,500,589	22,151,583	1,930,199	--	2,500,118	2,215,158
WELLS		--	--	--	--				
FOOTAGE	17,500 - 19,999	--	--	--	--	--	--	--	--
COSTS $		--	--	--	--	--	--	--	--
WELLS		--	1	--	1				
FOOTAGE	20,000 & OVER	--	24,250	--	24,250	--	24,250	--	24,250
COSTS $		--	21,382,736	--	21,382,736	--	21,382,737	--	21,382,737
TOTAL WELLS		285	74	369	728				
TOTAL FOOTAGE		1,754,587	534,660	2,956,431	5,245,678	6,156	7,225	8,012	7,206
TOTAL COSTS $		136,562,109	70,797,545	110,660,021	318,019,675	479,165	956,724	299,892	436,840

ESTIMATED COSTS OF DRILLING AND EQUIPPING WELLS, BY DEPTH INTERVALS - 1988

APPALACHIAN *

Table 51

	DEPTH INTERVAL (FEET)	TOTAL NUMBER OF WELLS, FOOTAGE DRILLED, AND COSTS				AVERAGE DEPTH AND COST PER WELL			
		OIL WELLS	GAS WELLS	DRY HOLES	TOTAL	OIL	GAS	DRY	TOTAL
WELLS		50	14	15	79				
FOOTAGE	0 - 1,249	44,048	13,081	9,648	66,777	881	934	643	845
COSTS $		1,682,865	484,428	362,812	2,530,105	33,657	34,602	24,187	32,027
WELLS		95	246	17	358				
FOOTAGE	1,250 - 2,499	204,573	490,471	33,674	728,718	2,153	1,994	1,981	2,036
COSTS $		3,942,408	20,250,981	725,671	24,919,060	41,499	82,321	42,687	69,606
WELLS		253	390	53	696				
FOOTAGE	2,500 - 3,749	785,980	1,275,952	173,473	2,235,405	3,107	3,272	3,273	3,212
COSTS $		18,209,814	47,574,400	3,311,971	69,096,185	71,976	121,986	62,490	99,276
WELLS		314	533	40	887				
FOOTAGE	3,750 - 4,999	1,350,032	2,321,741	170,619	3,842,392	4,299	4,356	4,265	4,332
COSTS $		33,386,281	74,106,024	3,401,228	110,893,533	106,326	139,036	85,031	125,021
WELLS		200	642	27	869				
FOOTAGE	5,000 - 7,499	1,162,544	3,608,880	167,358	4,938,782	5,813	5,621	6,198	5,683
COSTS $		30,684,754	115,110,607	3,943,631	149,738,992	153,424	179,300	146,060	172,312
WELLS		--	23	6	29				
FOOTAGE	7,500 - 9,999	--	195,324	52,875	248,199	--	8,492	8,813	8,559
COSTS $		--	13,619,152	2,506,977	16,126,129	--	592,137	417,830	556,073
WELLS		--	--	--	--				
FOOTAGE	10,000 - 12,499	--	--	--	--	--	--	--	--
COSTS $		--	--	--	--	--	--	--	--
WELLS		--	--	--	--				
FOOTAGE	12,500 - 14,999	--	--	--	--	--	--	--	--
COSTS $		--	--	--	--	--	--	--	--
WELLS		--	--	--	--				
FOOTAGE	15,000 - 17,499	--	--	--	--	--	--	--	--
COSTS $		--	--	--	--	--	--	--	--
WELLS		--	--	1	1				
FOOTAGE	17,500 - 19,999	--	--	17,700	17,700	--	--	17,700	17,700
COSTS $		--	--	2,930,278	2,930,278	--	--	2,930,278	2,930,278
WELLS		--	--	--	--				
FOOTAGE	20,000 & OVER	--	--	--	--	--	--	--	--
COSTS $		--	--	--	--	--	--	--	--
TOTAL WELLS		912	1,848	159	2,919				
TOTAL FOOTAGE		3,547,177	7,905,449	625,347	12,077,973	3,889	4,278	3,933	4,138
TOTAL COSTS $		87,906,122	271,145,592	17,182,568	376,234,282	96,388	146,724	108,066	128,892

*Includes New York, Ohio, Pennsylvania, and West Virginia

ESTIMATED COSTS OF DRILLING AND EQUIPPING WELLS, BY DEPTH INTERVALS - 1969

OFFSHORE FED - TOTAL *

Table 52

DEPTH INTERVAL (FEET)		TOTAL NUMBER OF WELLS, FOOTAGE DRILLED, AND COSTS				AVERAGE DEPTH AND COST PER WELL			
		OIL WELLS	GAS WELLS	DRY HOLES	TOTAL	OIL	GAS	DRY	TOTAL
WELLS		--	--	--	--				
FOOTAGE	0 - 1,249	--	--	--	--	--	--	--	--
COSTS $		--	--	--	--	--	--	--	--
WELLS		--	--	--	--				
FOOTAGE	1,250 - 2,499	--	--	--	--	--	--	--	--
COSTS $		--	--	--	--	--	--	--	--
WELLS		--	1	6	7				
FOOTAGE	2,500 - 3,749	--	2,900	17,759	20,659	--	2,900	2,960	2,951
COSTS $		--	1,217,841	4,958,153	6,175,994	--	1,217,841	826,359	882,285
WELLS		--	--	3	3				
FOOTAGE	3,750 - 4,999	--	--	13,265	13,265	--	--	4,422	4,422
COSTS $		--	--	9,874,148	9,874,148	--	--	3,291,383	3,291,383
WELLS		--	3	5	8				
FOOTAGE	5,000 - 7,499	--	19,925	34,088	54,013	--	6,642	6,818	6,752
COSTS $		--	10,701,948	13,312,021	24,013,969	--	3,567,316	2,662,404	3,001,746
WELLS		4	4	18	26				
FOOTAGE	7,500 - 9,999	37,316	33,402	152,852	223,570	9,329	8,351	8,492	8,599
COSTS $		17,132,922	14,479,425	61,335,515	92,947,862	4,283,231	3,619,856	3,407,529	3,574,918
WELLS		8	--	37	45				
FOOTAGE	10,000 - 12,499	90,216	--	408,505	498,721	11,277	--	11,041	11,083
COSTS $		48,201,417	--	161,467,617	209,669,034	6,025,177	--	4,363,990	4,659,312
WELLS		4	5	20	29				
FOOTAGE	12,500 - 14,999	52,616	68,370	269,865	390,851	13,154	13,674	13,493	13,478
COSTS $		24,044,501	33,844,291	121,361,648	179,250,440	6,011,126	6,768,858	6,068,083	6,181,050
WELLS		1	--	10	11				
FOOTAGE	15,000 - 17,499	15,346	--	162,210	177,556	15,346	--	16,221	16,141
COSTS $		5,434,382	--	87,790,736	93,225,118	5,434,382	--	8,779,074	8,475,011
WELLS		1	--	4	5				
FOOTAGE	17,500 - 19,999	19,470	--	71,826	91,296	19,470	--	17,957	18,259
COSTS $		10,917,537	--	31,608,869	42,526,406	10,917,537	--	7,902,218	8,505,281
WELLS		--	--	1	1				
FOOTAGE	20,000 & OVER	--	--	22,087	22,087	--	--	22,087	22,087
COSTS $		--	--	12,274,184	12,274,184	--	--	12,274,184	12,274,184
TOTAL WELLS		18	13	104	135				
TOTAL FOOTAGE		214,964	124,597	1,152,457	1,492,018	11,942	9,584	11,081	11,052
TOTAL COSTS $		105,730,759	60,243,505	503,982,891	669,957,155	5,873,931	4,634,116	4,845,990	4,962,646

* Includes Offshore Federal Waters-Alaska, and Offshore Federal Waters-Pacific Coast, which are not shown separately.

ESTIMATED COSTS OF DRILLING AND EQUIPPING WELLS, BY DEPTH INTERVALS - 1988

OFFSHORE FED. - GULF NORTH

Table 53

	DEPTH INTERVAL (FEET)	TOTAL NUMBER OF WELLS, FOOTAGE DRILLED, AND COSTS				AVERAGE DEPTH AND COST PER WELL			
		OIL WELLS	GAS WELLS	DRY HOLES	TOTAL	OIL	GAS	DRY	TOTAL
WELLS	0 - 1,249	--	--	--	--				
FOOTAGE		--	--	--	--	--	--	--	--
COSTS $		--	--	--	--	--	--	--	--
WELLS	1,250 - 2,499	--	--	--	--				
FOOTAGE		--	--	--	--	--	--	--	--
COSTS $		--	--	--	--	--	--	--	--
WELLS	2,500 - 3,749	--	1	6	7				
FOOTAGE		--	2,900	17,759	20,659	--	2,900	2,960	2,951
COSTS $		--	1,217,841	4,958,153	6,175,994	--	1,217,841	826,359	882,285
WELLS	3,750 - 4,999	--	--	3	3				
FOOTAGE		--	--	13,265	13,265	--	--	4,422	4,422
COSTS $		--	--	9,874,148	9,874,148	--	--	3,291,383	3,291,383
WELLS	5,000 - 7,499	--	3	5	8				
FOOTAGE		--	19,925	34,088	54,013	--	6,642	6,818	6,752
COSTS $		--	10,701,948	13,312,021	24,013,969	--	3,567,316	2,662,404	3,001,746
WELLS	7,500 - 9,999	2	4	18	24				
FOOTAGE		18,952	33,402	152,852	205,206	9,476	8,351	8,492	8,550
COSTS $		10,579,723	14,479,425	61,335,515	86,394,663	5,289,862	3,619,856	3,407,529	3,599,778
WELLS	10,000 - 12,499	6	--	36	42				
FOOTAGE		68,900	--	398,505	467,405	11,483	--	11,070	11,129
COSTS $		40,421,682	--	147,967,617	188,389,299	6,736,947	--	4,110,212	4,485,460
WELLS	12,500 - 14,999	3	5	20	28				
FOOTAGE		40,095	68,370	269,865	378,330	13,365	13,674	13,493	13,512
COSTS $		20,587,910	33,844,291	121,361,648	175,793,849	6,862,637	6,768,858	6,068,083	6,278,352
WELLS	15,000 - 17,499	1	--	10	11				
FOOTAGE		15,346	--	162,210	177,556	15,346	--	16,221	16,141
COSTS $		5,434,382	--	87,790,736	93,225,118	5,434,382	--	8,779,074	8,475,011
WELLS	17,500 - 19,999	1	--	4	5				
FOOTAGE		19,470	--	71,826	91,296	19,470	--	17,957	18,259
COSTS $		10,917,537	--	31,608,869	42,526,406	10,917,537	--	7,902,218	8,505,281
WELLS	20,000 & OVER	--	--	1	1				
FOOTAGE		--	--	22,087	22,087	--	--	22,087	22,087
COSTS $		--	--	12,274,184	12,274,184	--	--	12,274,184	12,274,184
TOTAL WELLS		13	13	103	129				
TOTAL FOOTAGE		162,763	124,597	1,142,457	1,429,817	12,520	9,584	11,092	11,084
TOTAL COSTS $		87,941,234	60,243,505	490,482,891	638,667,630	6,764,711	4,634,116	4,761,970	4,950,912

APPENDIXES

Isolating Drilling Cost Changes in the Joint Association Survey

Since total JAS drilling costs (hereafter referred to as expenditures, expenditures per well and expenditures per foot) reflect the depth, type and location of wells drilled, average expenditures per well and expenditures per foot will be susceptible to fluctuations in the well population.

For example, in general, though not without exception, exploratory wells are more expensive to drill than are development wells, gas wells are more expensive than oil wells, oil wells are more expensive than dry holes, offshore wells are more expensive than onshore wells, and deeper wells are more expensive than shallow wells. Therefore, shifts in activity among these general categories can cause expenditures per foot and per well to increase or decrease.

However, changes in "drilling costs" are typically thought of as changes in the cost of drilling comparable wells in different years, much as changes in the Consumer Price Index reflect changes in a similar group of items. This means that in order to compare the impact of price change alone on the JAS drilling expenditures from one year to another, one must either compare the costs of similar type wells at similar depths in similar locations, or somehow hold these factors constant for the entire well population.

The JAS isn't intended to provide drilling cost data based on price alone, because most JAS users aren't interested in knowing how the cost to drill a single well varies from one year to another. The reason: the character of the well population can fluctuate dramatically from one year to the next. However, by accounting for differences in depth, type and general location of wells drilled, the JAS drilling cost data give companies a detailed basis for comparison with their own drilling experiences.

Methodology

The JAS provides estimated expenditures per well and per foot for wells by type, depth and location. A composite drilling cost index was derived by redistributing post-1984 JAS expenditures on the 1984 well population distribution. By holding these factors--depth, type and general location of the well--constant to 1984, changes in drilling costs alone were calculated for 1986-1988.

More specifically, the percentage of total wells and footage drilled represented by the smallest possible division in the data in 1984 was calculated and used to weight 1984-1988 expenditures per well and per foot. These weighted costs were then summed to arrive at an adjusted average cost per well and average cost per foot for oil, gas and dry holes, onshore, offshore and total U.S.

In this way, we are able to isolate the effect on expenditures of changes in drilling costs alone, and by difference, to determine the effect of compositional shifts in the JAS well population on the drilling expenditures. This gives us the ability to observe drilling cost changes from year to year.

Drilling Costs Decreased

Redistributing the 1988 JAS drilling expenditures to reflect the depth, type and general location of wells drilled in 1984 reveals an actual increase in drilling costs. Unadjusted expenditures were up as well, but by a higher amount -- this is due to the increase in expenditures attributable to year-to-year changes in the depth, type and general location of wells. Tables 1-3 show the drilling cost index and changes in drilling costs on the new basis.

Although drilling expenditures increased in 1987, adjusted drilling expenditures decreased. Therefore, the increase in costs per well and per foot reported in the JAS for that year can be attributed to year-to-year changes in the depth, type, and general location of wells. This accounts for differences between the JAS survey and price indicators that show drilling costs decreasing between 1984 and 1987.

Total U.S. costs reflect, proportionately, the changes in onshore and offshore costs. Overall, the increases in drilling costs during 1988 were led by increases in dry hole costs. In 1987, drilling costs decreased due to a drop in dry hole costs.

Offshore cost per well and per foot increased from 1987, by 8.6 percent and 7 percent respectively. Offshore oil drilling costs decreased by 0.9 percent for cost per well and 0.5 percent for cost per foot.

Onshore drilling costs also increased during 1988, by 12.6 percent for cost per well and 10.5 percent for cost per foot. Oil, gas and dry hole costs all increased about the same, between 9 to 10.3 percent.

TABLE 1

ADJUSTED AVERAGE DRILLING COST INDICES--UNITED STATES
(1984=100)

	1986 AVG PER WELL	% CHG	1986 $ PER FOOT	% CHG	1987 AVG PER WELL	% CHG	1987 $ PER FOOT	% CHG	1988 AVG PER WELL	% CHG	1988 $ PER FOOT	% CHG
OIL:												
"Cost"	87.5	-10.7	87.3	-10.9	78.4	-10.4	78.1	-10.6	84.5	7.8	84.2	7.8
"Expenditure"	108.7	5.3	103.1	2.4	93.9	-13.7	88.0	-14.6	106.6	13.5	100.0	13.6
% Change	-19.5		-15.3		-16.5		-11.3		-20.7		-15.8	
GAS:												
"Cost"	89.4	-11.3	88.7	-11.8	73.6	-17.6	73.3	-17.4	80.8	9.8	80.4	9.7
"Expenditure"	106.8	2.8	104.7	-0.1	77.7	-27.3	78.3	-25.2	94.0	21.0	95.3	21.7
% Change	-16.3		-15.4		-5.3		-6.4		-14.0		-15.6	
DRY:												
"Cost"	90.5	-5.2	90.3	-5.7	67.2	-25.8	67.1	-25.6	73.8	9.8	73.8	10.0
"Expenditure"	118.3	4.5	113.9	3.9	78.7	-33.4	76.0	-33.3	111.3	41.4	99.7	31.2
% Change	-23.4		-20.8		-14.0		-11.7		-33.7		-26.6	
TOTAL:												
"Cost"	89.0	-9.3	88.6	-9.6	74.9	-15.8	73.6	-17.0	83.9	12.0	80.6	9.5
"Expenditure"	111.7	4.3	106.9	2.0	85.7	-23.3	81.7	-23.6	108.7	26.8	97.7	19.6
% Change	-20.3		-17.1		-12.6		-9.9		-22.8		-17.5	

"Expenditure" based on JAS estimated drilling expenditures which are a function of depth, type, general location of wells drilled in that year. "Cost" numbers are redistributed well expenditures based on 1984 drilling activity.

Source: American Petroleum Institute, Joint Association Survey on Drilling Costs, 1984-1988.

TABLE 2

ADJUSTED AVERAGE DRILLING COST INDICES--ONSHORE
(1984=100)

	1986 AVG PER WELL	% CHG	1986 $ PER FOOT	% CHG	1987 AVG PER WELL	% CHG	1987 $ PER FOOT	% CHG	1988 AVG PER WELL	% CHG	1988 $ PER FOOT	% CHG
OIL:												
"Cost"	87.7	-9.3	87.5	-9.5	78.6	-10.3	78.3	-10.4	85.7	9.0	85.5	9.2
"Expenditure"	100.4	-1.6	95.9	-3.4	88.1	-12.2	82.9	-13.6	104.1	18.2	92.0	11.0
% Change	-12.6		-8.8		-10.8		-5.5		-17.7		-7.1	
GAS:												
"Cost"	88.0	-12.1	87.3	-12.5	73.8	-16.1	73.6	-15.8	81.2	10.0	81.0	10.1
"Expenditure"	99.2	-4.2	98.0	-6.2	80.2	-19.1	80.8	-17.6	93.0	16.0	94.9	17.5
% Change	-11.3		-10.9		-8.0		-8.9		-12.7		-14.6	
DRY:												
"Cost"	89.8	-8.9	89.8	-8.9	70.7	-21.4	70.6	-21.4	78.0	10.3	77.9	10.3
"Expenditure"	110.5	1.4	107.3	1.2	75.0	-32.1	72.9	-32.0	95.1	26.8	87.3	19.8
% Change	-18.7		-16.3		-5.7		-3.2		-18.0		-10.8	
TOTAL:												
"Cost"	88.3	-10.0	88.1	-10.3	76.3	-13.7	75.0	-14.8	85.9	12.6	82.9	10.5
"Expenditure"	103.1	-1.9	99.4	-3.3	60.2	-41.6	57.6	-42.1	102.2	69.8	92.9	61.3
% Change	-14.3		-11.5		26.8		30.2		-15.9		-10.8	

"Expenditure" based on JAS estimated drilling expenditures which are a function of depth, type, general location of wells drilled in that year. "Cost" numbers are redistributed well expenditures based on 1984 drilling activity.

Source: American Petroleum Institute, Joint Association Survey on Drilling Costs, 1984-1988.

TABLE 3

ADJUSTED AVERAGE DRILLING COST INDICES--OFFSHORE
(1984=100)

	1986 AVG PER WELL	% CHG	1986 $ PER FOOT	% CHG	1987 AVG PER WELL	% CHG	1987 $ PER FOOT	% CHG	1988 AVG PER WELL	% CHG	1988 $ PER FOOT	% CHG
OIL:												
"Cost"	86.1	-19.5	86.2	-19.0	77.0	-10.6	76.3	-11.6	76.3	-0.9	75.9	-0.5
"Expenditure"	114.9	-8.9	109.9	-10.9	114.2	-0.6	106.2	-3.4	105.8	-7.4	93.9	-11.6
% Change	-25.1		-21.5		-32.6		-28.2		-27.9		-19.2	
GAS:												
"Cost"	95.7	-7.8	94.4	-8.7	72.9	-23.8	72.0	-23.7	78.9	8.2	77.7	7.9
"Expenditure"	125.1	7.4	114.6	3.1	81.6	-34.7	76.2	-33.5	99.1	21.4	89.6	17.6
% Change	-23.5		-17.6		-10.7		-5.5		-20.4		-13.3	
DRY:												
"Cost"	92.1	3.9	91.3	2.5	59.3	-35.6	59.2	-35.2	64.3	8.4	64.5	9.0
"Expenditure"	108.1	2.4	105.4	-0.6	65.4	-39.5	66.9	-36.5	72.0	10.1	72.0	7.6
% Change	-14.8		-13.4		-9.3		-11.5		-10.7		-10.4	
TOTAL:												
"Cost"	91.5	-6.2	89.9	-7.6	67.6	-26.1	66.7	-25.9	73.4	8.6	71.4	7.0
"Expenditure"	113.3	-1.7	107.7	-4.0	81.9	-27.7	79.4	-26.3	88.0	7.4	81.9	3.1
% Change	-19.2		-16.5		-17.5		-16.0		-16.6		-12.8	

"Expenditure" based on JAS estimated drilling expenditures which are a function of depth, type, general location of wells drilled in that year. "Cost" numbers are redistributed well expenditures based on 1984 drilling activity.

Source: American Petroleum Institute, Joint Association Survey on Drilling Costs, 1984-1988.

APPENDIX B

JOINT ASSOCIATION SURVEY ON DRILLING COSTS

CONFIDENTIAL

WELLS DRILLED, FOOTAGE, AND COST IN THE U.S.

CONFIDENTIAL

PAGE

OPERATOR NAME	WELL NUMBER - LEASE NAME	STATE	SH	WELL IDENTIFICATION NUMBER
ABC OIL COMPANY	#1 J.M. OBERMILLER	CA	ON	04-029-23459

TYPE	OIL ZONES	GAS ZONES	DEPTH	COMPLETION DATE	SECTION	TWP	RANGE	CDS	X COORD or LATITUDE	Y COORD or LONGITUDE
EXP-OIL	1	0	3456	08/88	031	15-N	053-E			

COUNTY NAME	LOCATION	TOTAL COST
KERN	958 FNL 388 FWL	

OPERATOR NAME	WELL NUMBER - LEASE NAME	STATE	SH	WELL IDENTIFICATION NUMBER
ABC OIL COMPANY	#8 P.J. GIBSON	OK	ON	35-053-10432

TYPE	OIL ZONES	GAS ZONES	DEPTH	COMPLETION DATE	SECTION	TWP	RANGE	CDS	X COORD or LATITUDE	Y COORD or LONGITUDE
DEV-GAS	0	1	2335	04/88	017	19-N	044-E			

COUNTY NAME	LOCATION	TOTAL COST
GRANT	2130 FSL 1560 FWL	

OPERATOR NAME	WELL NUMBER - LEASE NAME	STATE	SH	WELL IDENTIFICATION NUMBER
ABC OIL COMPANY	B-3 OCS-G-3232	LA	OF	17-710-22106

TYPE	OIL ZONES	GAS ZONES	DEPTH	COMPLETION DATE	SECTION	TWP	RANGE	CDS	X COORD or LATITUDE	Y COORD or LONGITUDE
DEV-DRY	0	0	8724	11/88						

COUNTY NAME	LOCATION	TOTAL COST
EUGENE ISLAND SOUTH	BLOCK 361	

OPERATOR NAME	WELL NUMBER - LEASE NAME	STATE	SH	WELL IDENTIFICATION NUMBER

TYPE	OIL ZONES	GAS ZONES	DEPTH	COMPLETION DATE	SECTION	TWP	RANGE	CDS	X COORD or LATITUDE	Y COORD or LONGITUDE

COUNTY NAME	LOCATION	TOTAL COST

OPERATOR NAME	WELL NUMBER - LEASE NAME	STATE	SH	WELL IDENTIFICATION NUMBER

TYPE	OIL ZONES	GAS ZONES	DEPTH	COMPLETION DATE	SECTION	TWP	RANGE	CDS	X COORD or LATITUDE	Y COORD or LONGITUDE

COUNTY NAME	LOCATION	TOTAL COST

OPERATOR NAME	WELL NUMBER - LEASE NAME	STATE	SH	WELL IDENTIFICATION NUMBER

TYPE	OIL ZONES	GAS ZONES	DEPTH	COMPLETION DATE	SECTION	TWP	RANGE	CDS	X COORD or LATITUDE	Y COORD or LONGITUDE

COUNTY NAME	LOCATION	TOTAL COST

OPERATOR NAME	WELL NUMBER - LEASE NAME	STATE	SH	WELL IDENTIFICATION NUMBER

TYPE	OIL ZONES	GAS ZONES	DEPTH	COMPLETION DATE	SECTION	TWP	RANGE	CDS	X COORD or LATITUDE	Y COORD or LONGITUDE

COUNTY NAME	LOCATION	TOTAL COST

INDIVIDUAL SUBMITTING REPORT: _____

TELEPHONE NUMBER: AC _____ _____

INSTRUCTIONS AND DEFINITIONS FOR DRILLING COSTS

1. **WELLS TO BE REPORTED.** Report each domestic well completed by you as OPERATOR (whether actually drilled by you or drilled for you by a contractor), in the survey year. Report each well completed by you as operator regardless of the size of your working interest in the well. Do not report wells drilled by others in which you may have had only a part of a working interest regardless of the size of such interest. Do not report wells started in the survey year or in prior years, but not completed as of December 31 of the survey year. Do not report wells reentered for completion at shallower depths, old wells drilled deeper, old wells worked over, stratigraphic tests, core test, or service wells (including input wells).

2. **SHORE.** Enter "OFF" if well is located offshore; enter "ON" if it is onshore. An offshore well is one which is bottomed at, or produces from, a point which lies seaward of the coastline. If a state agency uses a different basis for classifying onshore and offshore wells, the state classification should be used. In general, the term "coastline" means the line of ordinary low water along that portion of the coast which is in direct contact with the open sea or the line marking the seaward limit of inland waters. For the purposes of the JAS Cook Inlet (Alaska) is classified as "offshore".

3. **OP CODE.** Make no entry. The API will supply the operator code.

4. **WELL IDENTIFICATION NUMBER.** Enter the STATE DESIGNATED API NUMBER if it is available. Where states do not assign API well numbers, or if you do not know the number, leave this item blank.

5. **TYPE.** Insert the classification for each well reported as either an exploratory (EXP) or a development (DEV) well. Exploratory wells include new-field wildcats, new-pool wildcats, deeper-pool tests, shallower-pool tests, and outposts (extensions). Development wells include all wells drilled to produce oil and gas from pools discovered by previous drilling.

   Subclassify all wells as either oil, gas or dry holes, e.g. "EXP-OIL", "DEV-GAS", "EXP-DRY". An oil well is a well completed for the production of crude oil from at least one oil zone or reservoir. A gas well is one which can produce hydrocarbons existing initially in a gaseous phase in the reservoir. So-called gas condensate wells should be reported as gas wells. A dry hole is an exploratory or development well found to be incapable of producing either oil or gas in sufficient quantities to justify completion as an oil or gas well. The state regulatory classification should be used, if available; if not available, use a classification by company engineers.

   Count MULTIPLE COMPLETIONS as one well. (See Item 6 for definition.)

6. **OIL ZONES, GAS ZONES.** Enter the total number of separately producing oil zones and gas zones (reservoirs).

   As noted under Item 5, a multiple completion should be reported as one well. A multiple completion well is a well equipped to produce oil and/or gas separately from more than one reservoir. SUCH WELLS CONTAIN MULTIPLE STRINGS OF TUBING OR OTHER EQUIPMENT WHICH PERMIT PRODUCTION FROM THE VARIOUS COMPLETIONS TO BE MEASURED AND ACCOUNTED FOR SEPARATELY.

   Report a multiple completion well as an oil well if oil is produced from at least one of several zones, even though gas and gas condensate may be produced from one or more zones in the same well. Report a multiple completion well as a gas well if oil is not produced from any of the several zones.

   For a dry hole enter the word "DRY".

7. **DEPTH.** Report for each well the total feet of penetration measured down the well bore. Include all plugged back footage, but exclude bypassed footage resulting from remedial sidetrack drilling operations. For OFFSHORE WELLS drilled from a platform or a barge over water and the reference point is above water, the depth of the water is included in the total length of the well bore.

8. **COMPLETION DATE.** Enter the month and year of completion.

9. **SECTION, TWP, RANGE.** Enter location data if appropriate for area.

10. **COUNTY NAME AND LOCATION.** For each onshore well reported provide the county name, and for state and federal offshore waters provide pseudo-county names. Under location enter the designated block numbers for state and federal offshore wells and any other available information that would be helpful in identifying well locations.

11. **TOTAL COST.** Report the TOTAL cost (tangible and intangible) of each well completed by you as operator in the survey year (whether actually drilled by you or drilled for you by contractors). The TOTAL of such costs should be reported even though you as operator had only a part of a working interest in the well.

    Do not report costs of wells drilled by others in which you had a working interest regardless of the size of such interest. The costs to be reported are those associated with wells which are completed during the survey year and the dollar amount to be reported is the accumulated cost of such wells from the time locations were made until the wells were completed as productive wells or abandoned after drilling was terminated because they were non-productive.

    PLEASE ROUND OFF TOTAL COSTS TO THE NEAREST DOLLAR.

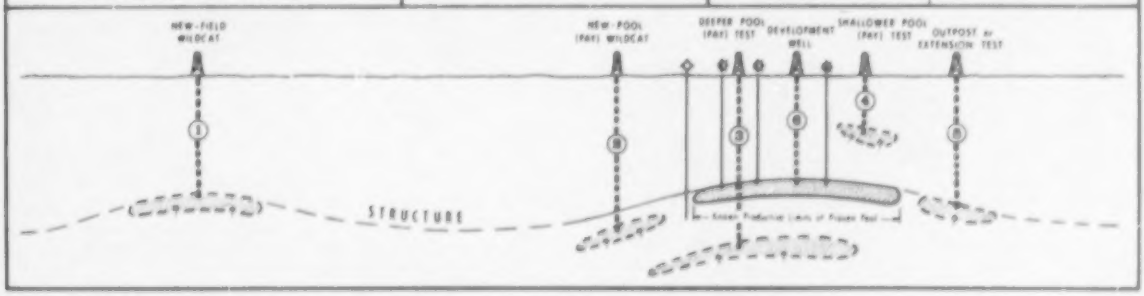
    In general, the elements contributing to reported cost are the expenditures for drilling dry holes and productive wells and equipping new productive wells through the "Christmas tree" installation. More specifically, these cost elements are the costs of labor, materials, supplies, water, fuels, power, and direct overhead (i.e., field, district, and regional), for such operations as site preparation, road building, erecting and dismantling derricks and drilling rigs, drilling hole, running and cementing casing, hauling materials, etc. Include the total cost of water, if purchased, or cost of water well, if drilled and chargeable to oil or gas well drilling operations. Well costs also include machinery and tool charges and rentals, and depreciation charges, where appropriate, for rigs and other equipment and facilities which will be used in drilling more than one well. Deduct the condition value of materials salvaged after use where appropriate.

    Do not report the cost of lease equipment such as artificial lift equipment and downhole lift equipment, flow lines, flow tanks, separators, etc., that are required for production. Do not reduce the costs by test well, bottom hole, or dry hole contributions.

    For OFFSHORE WELLS, include costs on fixed platforms and islands. Where facilities serve more than one well, the costs should be allocated to each well on the basis of the operator's best current estimate of the ultimate number of wells that will use the facility. Also, include cost expirations (depreciation or amortization) for company-owned mobile platforms, barges, and tenders.

AAPG and API Classification of Wells

OBJECTIVE OF DRILLING				INITIAL CLASSIFICATION ♦ WHEN DRILLING IS STARTED	FINAL CLASSIFICATION AFTER COMPLETION OR ABANDONMENT			
					SUCCESSFUL ♦ ✪ ♣		UNSUCCESSFUL ✧	
Drilling for a **new field** on a structure or in an environment never before productive				1. NEW-FIELD WILDCAT	NEW-FIELD DISCOVERY WILDCAT		DRY NEW-FIELD WILDCAT	
Drilling for a **new pool** on a structure or in a geological environment already productive	NEW POOL TESTS	Drilling **outside limits** of a proved area of pool		2. NEW-POOL (PAY) WILDCAT	NEW-POOL DISCOVERY WELLS (Sometimes extension wells)	NEW-POOL DISCOVERY WILDCAT (Sometimes an extension well)	DRY NEW-POOL TESTS	DRY NEW-POOL WILDCAT
		Drilling **inside limits** of proved area of pool	For a **new pool below** deepest proven pool	3. DEEPER POOL (PAY) TEST		DEEPER POOL DISCOVERY WELL		DRY DEEPER POOL TEST
			For a **new pool above** deepest proven pool	4. SHALLOWER POOL (PAY) TEST		SHALLOWER POOL DISCOVERY WELL		DRY SHALLOWER POOL TEST
Drilling for **long extension** of a partly developed pool				5. OUTPOST or EXTENSION TEST	EXTENSION WELL (Sometimes a new-pool discovery well)		DRY OUTPOST OR DRY EXTENSION TEST	
Drilling to **exploit** or **develop** a hydrocarbon accumulation discovered by previous drilling				6. DEVELOPMENT WELL	DEVELOPMENT WELL		DRY DEVELOPMENT WELL	



LAHEE CLASSIFICATION OF WELLS, AS APPLIED BY CSD

Tests drilled with the intent of being completed as hydrocarbon producers if found

NEW FIELD WILDCAT. A new field wildcat is located far from producing pools, and on a structure which has not produced before. In regions where local structure has little or no control on accumulation, these holes are generally at least 2 miles from the nearest productive area. Distance, however, is not the determining factor. The classification is based on the degree of risk assumed by the operator, and his intention to test a structure or stratigraphic condition not previously proved productive.

NEW-POOL (PAY) WILDCAT. A new-pool wildcat is located to explore for new pools on a structure already producing, but off to one side of the presently producing area. In some regions where local structure is almost negligible as a control, exploration holes of this group may be called "near wildcats." Such will usually be less than 2 miles from the nearest productive area. Sometimes a new-pool wildcat may extend a pool already partly developed, if so its final classification is an Extension.

DEEPER-POOL (PAY) TEST. A deeper-pool test is an exploratory hole located within the productive area of a pool, or pools, already partly or wholly developed. It is drilled below the deepest such pool penetrated by it to explore for deeper unknown prospects. Sometimes such a hole extends a deeper pool which has been partly developed in another part of the field.

SHALLOWER-POOL (PAY) TEST. A shallower-pool test is exploratory only if drilled in search of some new productive reservoir, unknown but possibly suspected from data secured from other wells. The test must be located within the productive area of a pool, or pools, previously developed. Sometimes such a test extends a shallower-pool partly developed elsewhere in the same field.

OUTPOST OR EXTENSION TEST. An outpost is located and drilled with the expectation of extending for a considerable distance the productive area of a partly developed pool. It is usually two or more locations distant from the nearest productive area. Sometimes an outpost discovers a new pool.

DEVELOPMENT WELL. A well drilled to exploit a hydrocarbon accumulation discovered by previous drilling.

Tests drilled without the intent of being completed for hydrocarbon production

STRATIGRAPHIC TEST. A drilling effort, geologically directed, to obtain information pertaining to a specific earth condition that might lead toward a possible accumulation of hydrocarbon. It must be drilled without the intention of being completed for hydrocarbon production. This classification includes tests identified as core tests by some operators.

SERVICE WELL. A well that is either drilled or completed for the purpose of supporting production of an existing field through observation, injection, water supply, etc.

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SUMMARY OF SAMPLE DATA - 1988

EXPLORATORY WELLS

	DEPTH INTERVAL (FEET)	TOTAL NUMBER OF WELLS, FOOTAGE DRILLED, AND COSTS				AVERAGE DEPTH AND COST PER WELL			
		OIL WELLS	GAS WELLS	DRY HOLES	TOTAL	OIL	GAS	DRY	TOTAL
WELLS		4	7	40	51				
FOOTAGE	0 - 1,249	3,564	3,696	30,400	37,660	891	528	760	738
COSTS $		153,452	119,297	534,931	807,680	38,363	17,042	13,373	15,837
WELLS		12	50	109	171				
FOOTAGE	1,250 - 2,499	23,625	100,569	207,921	332,115	1,969	2,011	1,908	1,942
COSTS $		1,022,794	12,180,712	6,673,655	19,877,161	85,233	243,614	61,226	116,241
WELLS		27	41	242	310				
FOOTAGE	2,500 - 3,749	89,241	119,624	779,052	987,917	3,305	2,918	3,219	3,187
COSTS $		3,664,604	8,001,889	23,299,458	34,965,951	135,726	195,168	96,279	112,793
WELLS		84	22	394	500				
FOOTAGE	3,750 - 4,999	369,304	95,878	1,727,159	2,192,341	4,396	4,358	4,384	4,385
COSTS $		11,145,077	4,802,746	50,235,058	66,182,881	132,679	218,307	127,500	132,366
WELLS		145	74	566	785				
FOOTAGE	5,000 - 7,499	889,158	460,582	3,452,089	4,801,829	6,132	6,224	6,099	6,117
COSTS $		43,299,147	24,767,888	114,377,339	182,444,374	298,615	334,701	202,080	232,413
WELLS		71	107	339	517				
FOOTAGE	7,500 - 9,999	613,907	917,169	2,929,136	4,460,212	8,647	8,572	8,641	8,627
COSTS $		42,803,492	86,992,964	206,778,714	336,575,170	602,866	813,018	609,967	651,016
WELLS		40	44	277	361				
FOOTAGE	10,000 - 12,499	444,373	497,153	3,074,191	4,015,717	11,109	11,299	11,098	11,124
COSTS $		37,999,573	59,502,194	346,950,353	444,452,220	949,992	1,352,323	1,252,528	1,231,170
WELLS		30	29	131	190				
FOOTAGE	12,500 - 14,999	395,853	393,156	1,783,471	2,572,480	13,195	13,557	13,614	13,539
COSTS $		43,975,659	95,145,004	298,516,692	437,637,355	1,465,855	3,280,862	2,278,753	2,303,355
WELLS		2	19	62	83				
FOOTAGE	15,000 - 17,499	33,475	301,683	999,314	1,334,472	16,738	15,878	16,118	16,078
COSTS $		5,113,229	94,642,208	279,973,879	379,729,316	2,556,615	4,981,169	4,515,708	4,575,052
WELLS		1	3	20	24				
FOOTAGE	17,500 - 19,999	19,014	55,108	367,265	441,387	19,014	18,369	18,363	18,391
COSTS $		7,667,477	10,774,890	91,529,456	109,971,823	7,667,477	3,591,630	4,576,473	4,582,160
WELLS		--	2	1	3				
FOOTAGE	20,000 & OVER	--	44,739	20,000	64,739	--	22,370	20,000	21,580
COSTS $		--	27,710,267	6,794,993	34,505,260	--	13,855,134	6,794,993	11,501,753
TOTAL WELLS		416	398	2,181	2,995				
TOTAL FOOTAGE		2,881,514	2,989,357	15,369,998	21,240,869	6,927	7,511	7,047	7,092
TOTAL COSTS $		196,844,604	424,640,059	1,425,664,528	2,047,149,191	473,184	1,066,935	653,675	683,522

SUMMARY OF SAMPLE DATA - 1988

DEVELOPMENT WELLS

DEPTH INTERVAL (FEET)		TOTAL NUMBER OF WELLS, FOOTAGE DRILLED, AND COSTS				AVERAGE DEPTH AND COST PER WELL			
		OIL WELLS	GAS WELLS	DRY HOLES	TOTAL	OIL	GAS	DRY	TOTAL
WELLS		706	32	80	818				
FOOTAGE	0 - 1,249	620,426	27,538	63,443	711,407	879	861	793	870
COSTS $		38,894,790	870,987	1,736,225	41,502,002	55,092	27,218	21,703	50,736
WELLS		1,001	363	154	1,518				
FOOTAGE	1,250 - 2,499	1,758,223	678,889	290,195	2,727,307	1,756	1,870	1,884	1,797
COSTS $		95,409,691	33,110,027	7,757,976	136,277,694	95,314	91,212	50,376	89,775
WELLS		824	796	257	1,877				
FOOTAGE	2,500 - 3,749	2,575,120	2,438,902	811,596	5,825,618	3,125	3,064	3,158	3,104
COSTS $		125,009,826	146,217,692	19,305,287	290,532,805	151,711	183,691	75,118	154,786
WELLS		1,002	327	251	1,580				
FOOTAGE	3,750 - 4,999	4,510,006	1,420,136	1,093,616	7,023,758	4,501	4,343	4,357	4,445
COSTS $		179,659,772	58,190,881	24,385,626	262,236,279	179,301	177,954	97,154	165,972
WELLS		1,123	755	518	2,396				
FOOTAGE	5,000 - 7,499	6,908,040	4,566,562	3,165,660	14,640,262	6,151	6,048	6,111	6,110
COSTS $		350,087,318	207,188,953	100,313,967	657,590,238	311,743	274,422	193,656	274,453
WELLS		796	488	318	1,602				
FOOTAGE	7,500 - 9,999	6,813,868	4,196,537	2,745,999	13,756,404	8,560	8,599	8,635	8,587
COSTS $		468,177,048	299,255,742	157,592,944	925,025,734	588,162	613,229	495,575	577,419
WELLS		264	289	186	739				
FOOTAGE	10,000 - 12,499	2,912,678	3,230,770	2,083,765	8,227,213	11,033	11,179	11,203	11,133
COSTS $		320,150,006	405,438,349	192,212,429	917,800,784	1,212,689	1,402,901	1,033,400	1,241,950
WELLS		78	146	82	306				
FOOTAGE	12,500 - 14,999	1,045,601	1,983,344	1,119,630	4,148,575	13,405	13,585	13,654	13,557
COSTS $		179,537,622	333,453,020	138,822,986	651,813,628	2,301,765	2,283,925	1,692,963	2,130,110
WELLS		18	58	41	117				
FOOTAGE	15,000 - 17,499	282,407	922,776	649,786	1,854,969	15,689	15,910	15,848	15,854
COSTS $		65,051,036	227,066,907	114,015,985	406,133,928	3,613,947	3,914,947	2,780,878	3,471,230
WELLS		5	21	15	41				
FOOTAGE	17,500 - 19,999	91,676	382,384	274,574	748,634	18,335	18,209	18,305	18,259
COSTS $		31,434,965	118,184,264	68,426,685	218,045,914	6,286,993	5,627,822	4,561,779	5,318,193
WELLS		1	2	2	5				
FOOTAGE	20,000 & OVER	20,152	42,315	42,945	105,412	20,152	21,158	21,473	21,082
COSTS $		3,991,973	20,351,222	22,610,256	46,953,451	3,991,973	10,175,611	11,305,128	9,390,690
TOTAL WELLS		5,818	3,277	1,904	10,999				
TOTAL FOOTAGE		27,538,197	19,890,153	12,341,209	59,769,559	4,733	6,070	6,482	5,434
TOTAL COSTS $		1,857,404,047	1,849,328,044	847,180,366	4,553,912,457	319,251	564,336	444,948	414,030

SUMMARY OF SAMPLE DATA - 1988

SINGLE-COMPLETION WELLS

DEPTH INTERVAL (FEET)		TOTAL NUMBER OF WELLS, FOOTAGE DRILLED, AND COSTS		AVERAGE DEPTH AND COST PER WELL	
		OIL WELLS	GAS WELLS	OIL	GAS
WELLS		710	38		
FOOTAGE	0 - 1,249	623,990	30,654	879	807
COSTS $		39,048,242	971,053	54,998	25,554
WELLS		1,007	407		
FOOTAGE	1,250 - 2,499	1,770,049	766,930	1,758	1,884
COSTS $		96,136,060	44,465,777	95,468	109,253
WELLS		843	809		
FOOTAGE	2,500 - 3,749	2,639,214	2,470,604	3,131	3,054
COSTS $		127,745,398	149,281,067	151,537	184,525
WELLS		1,080	331		
FOOTAGE	3,750 - 4,999	4,854,456	1,437,872	4,495	4,344
COSTS $		189,732,918	59,123,304	175,679	178,620
WELLS		1,235	776		
FOOTAGE	5,000 - 7,499	7,581,923	4,694,337	6,123	6,049
COSTS $		382,800,316	207,480,317	309,960	267,372
WELLS		824	506		
FOOTAGE	7,500 - 9,999	7,062,263	4,377,581	8,571	8,651
COSTS $		480,021,368	334,101,336	582,550	660,279
WELLS		290	300		
FOOTAGE	10,000 - 12,499	3,204,157	3,356,628	11,049	11,189
COSTS $		334,024,602	405,115,077	1,151,809	1,350,384
WELLS		103	169		
FOOTAGE	12,500 - 14,999	1,373,933	2,293,882	13,339	13,573
COSTS $		209,380,734	413,466,186	2,032,823	2,446,546
WELLS		19	74		
FOOTAGE	15,000 - 17,499	299,517	1,175,464	15,764	15,885
COSTS $		65,128,211	303,297,611	3,427,801	4,098,616
WELLS		5	24		
FOOTAGE	17,500 - 19,999	93,090	437,492	18,618	18,229
COSTS $		36,704,587	128,959,154	7,340,918	5,373,298
WELLS		1	4		
FOOTAGE	20,000 & OVER	20,152	87,054	20,152	21,764
COSTS $		3,991,973	48,061,489	3,991,973	12,015,372

SUMMARY OF SAMPLE DATA - 1988

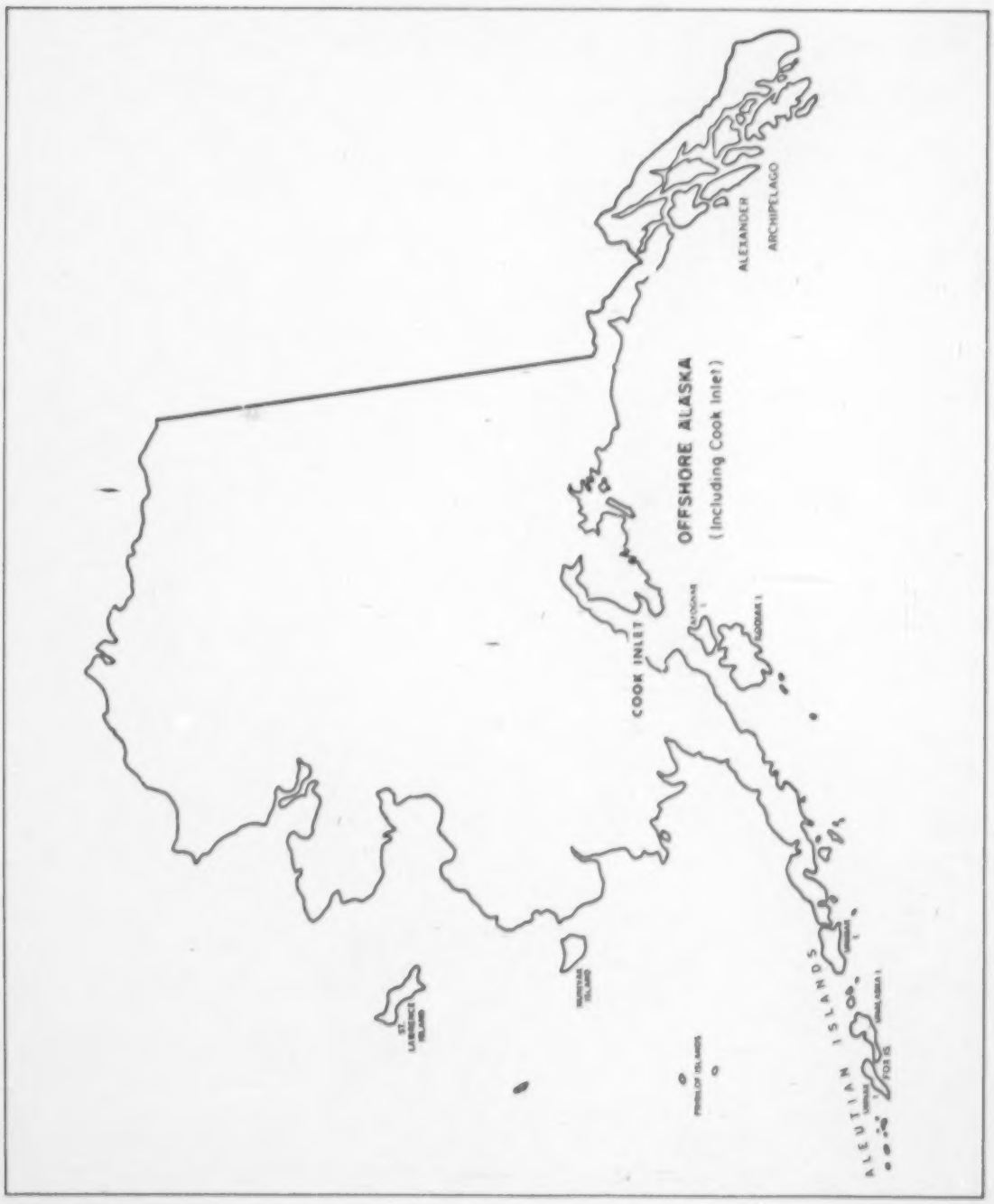
MULTIPLE-COMPLETION WELLS

	DEPTH INTERVAL (FEET)	TOTAL NUMBER OF WELLS, FOOTAGE DRILLED, AND COSTS: OIL WELLS	TOTAL NUMBER OF WELLS, FOOTAGE DRILLED, AND COSTS: GAS WELLS	AVERAGE DEPTH AND COST PER WELL: OIL	AVERAGE DEPTH AND COST PER WELL: GAS
WELLS		--	1		
FOOTAGE	0 - 1,249	--	580	--	580
COSTS $		--	19,231	--	19,231
WELLS		6	6		
FOOTAGE	1,250 - 2,499	11,799	12,528	1,967	2,088
COSTS $		296,425	824,962	49,404	137,494
WELLS		8	28		
FOOTAGE	2,500 - 3,749	25,147	87,922	3,143	3,140
COSTS $		929,032	4,938,514	116,129	176,376
WELLS		6	18		
FOOTAGE	3,750 - 4,999	24,854	78,142	4,142	4,341
COSTS $		1,071,931	3,870,323	178,655	215,018
WELLS		33	53		
FOOTAGE	5,000 - 7,499	235,275	332,807	7,130	6,279
COSTS $		10,586,149	24,476,524	320,792	461,821
WELLS		43	89		
FOOTAGE	7,500 - 9,999	365,512	736,125	8,500	8,271
COSTS $		30,959,172	52,147,370	719,981	585,926
WELLS		14	33		
FOOTAGE	10,000 - 12,499	152,894	371,295	10,921	11,251
COSTS $		24,125,077	59,825,466	1,723,220	1,812,893
WELLS		5	6		
FOOTAGE	12,500 - 14,999	67,521	82,618	13,504	13,770
COSTS $		14,132,547	15,131,838	2,826,510	2,521,973
WELLS		1	3		
FOOTAGE	15,000 - 17,499	16,365	48,995	16,365	16,332
COSTS $		5,036,054	18,411,504	5,036,054	6,137,168
WELLS		1	--		
FOOTAGE	17,500 - 19,999	17,600	--	17,600	--
COSTS $		2,397,855	--	2,397,855	--
WELLS		--	--		
FOOTAGE	20,000 & OVER	--	--	--	--
COSTS $		--	--	--	--

J.A.S SAMPLE DISTRIBUTION 1984 - 1988

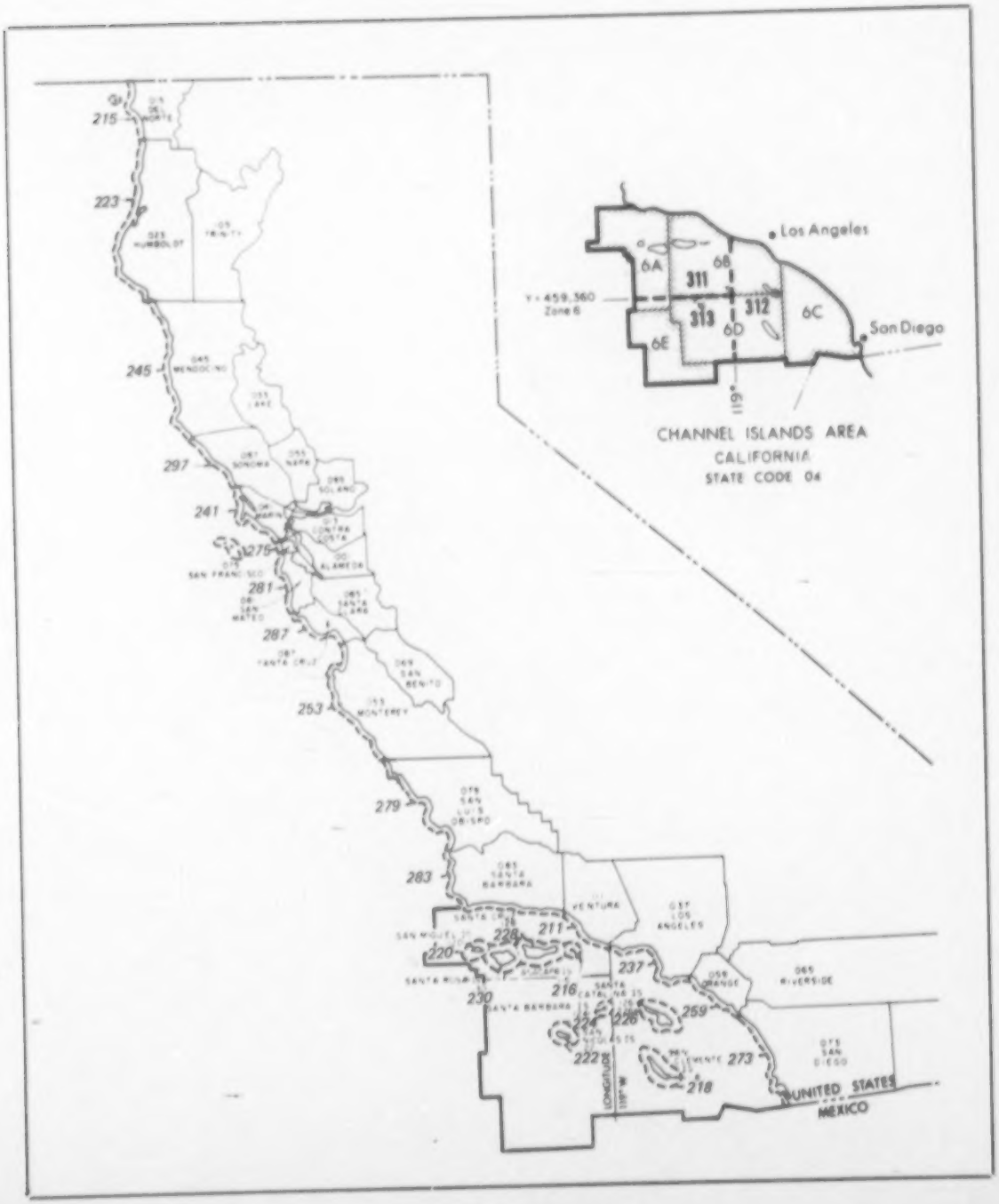
No. of Wells Drilled	1984		1985		1986		1987		1988	
	No. of Co's	No. of Wells	No. of Co's	No. of Wells	No. of Co's	No. of Wells	No. of Co's	No. of Wells	No. of Co's	No. of Wells
1-4	740	1,550	719	1,491	775	1,501	958	1,841	955	1,819
5-9	291	1,912	281	1,818	214	1,382	250	1,601	223	1,434
10-24	255	3,901	256	3,916	164	2,460	175	2,617	140	2,101
25-49	87	2,968	66	2,209	41	1,356	40	1,296	36	1,200
50-99	38	2,629	31	2,032	19	1,373	17	1,201	21	1,362
100 & over	26	10,483	33	13,572	23	7,221	18	6,473	21	6,078
Total	1,437	23,443	1,386	25,038	1,236	15,293	1,458	15,029	1,396	13,994

MAP I
SUBDIVISIONS OF ALASKA



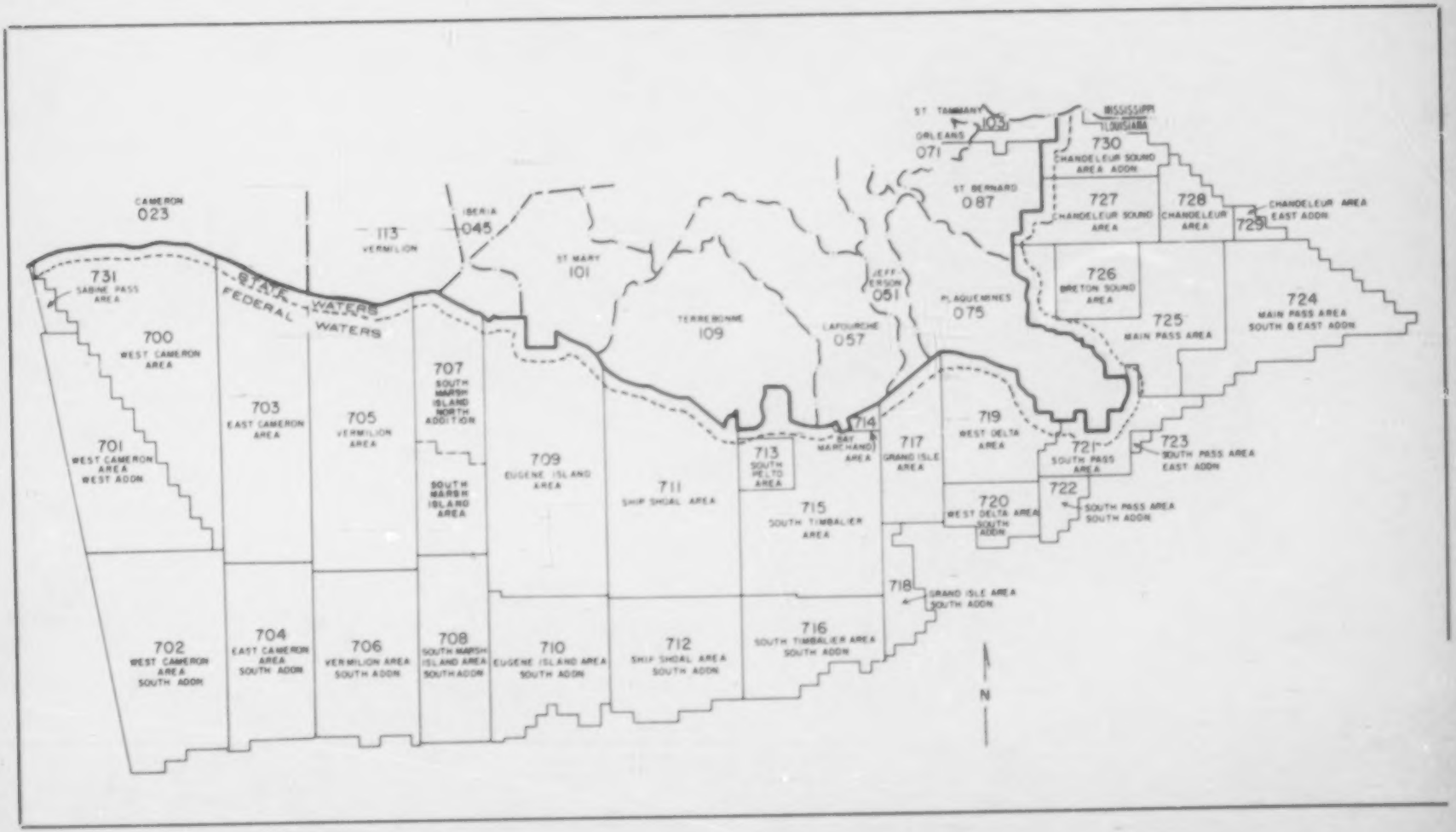
MAP II
SUBDIVISIONS OF CALIFORNIA

MAP III
CALIFORNIA OFFSHORE



MAP IV
SUBDIVISIONS OF LOUISIANA

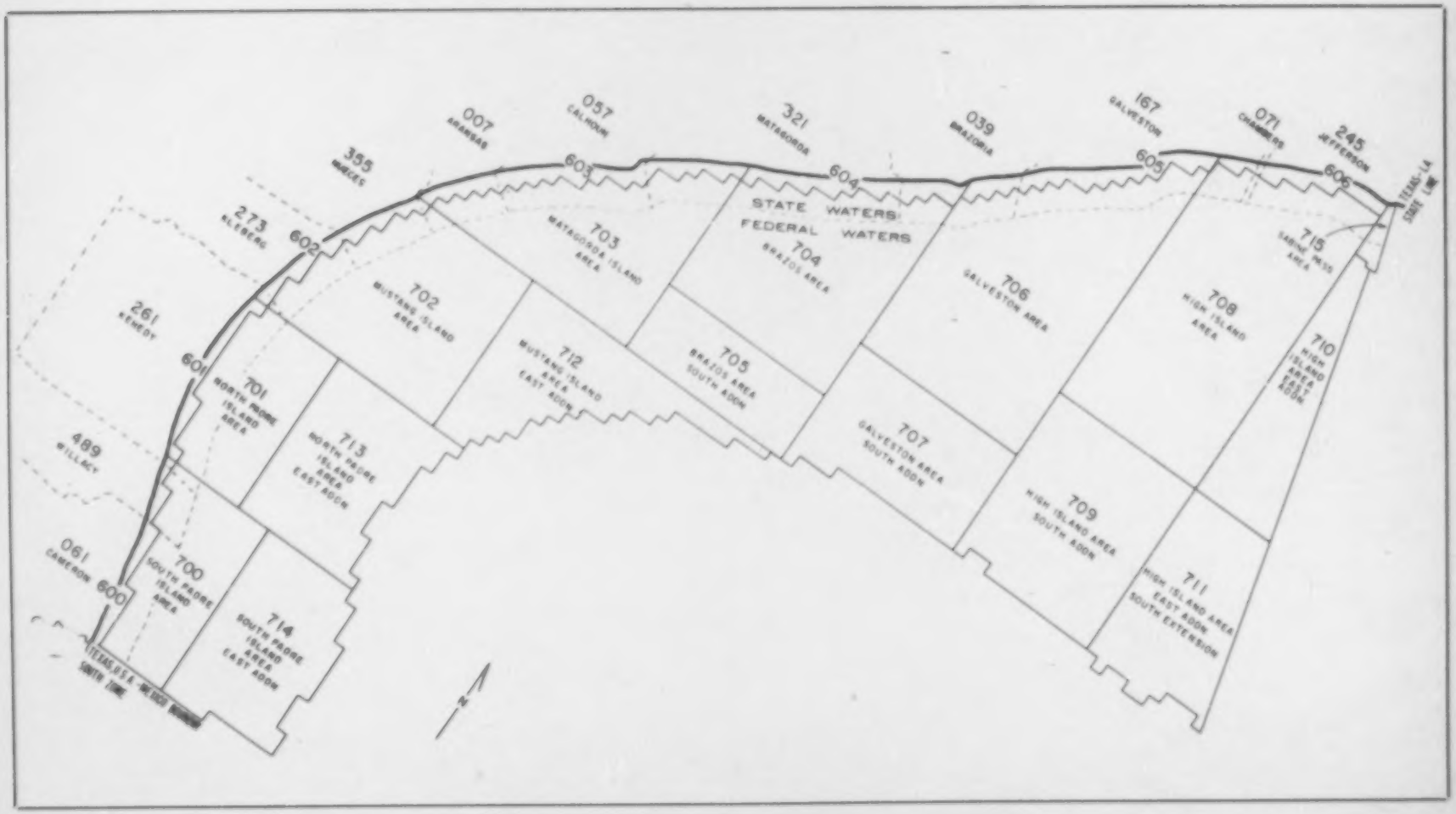
MAP V
LOUISIANA OFFSHORE


CAMERON 023
731 SABINE PASS AREA
700 WEST CAMERON AREA
701 WEST CAMERON AREA WEST ADDN
702 WEST CAMERON AREA SOUTH ADDN
STATE WATERS
FEDERAL WATERS
113 VERMILION
703 EAST CAMERON AREA
704 EAST CAMERON AREA SOUTH ADDN
705 VERMILION AREA
706 VERMILION AREA SOUTH ADDN
IBERIA 045
707 SOUTH MARSH ISLAND NORTH ADDITION
SOUTH MARSH ISLAND AREA
708 SOUTH MARSH ISLAND AREA SOUTH ADDN
ST MARY 101
709 EUGENE ISLAND AREA
710 EUGENE ISLAND AREA SOUTH ADDN
TERREBONNE 109
711 SHIP SHOAL AREA
712 SHIP SHOAL AREA SOUTH ADDN
LAFOURCHE 057
713 SOUTH PELTO AREA
714 BAY MARCHAND AREA
715 SOUTH TIMBALIER AREA
716 SOUTH TIMBALIER AREA SOUTH ADDN
717 GRAND ISLE AREA
718 GRAND ISLE AREA SOUTH ADDN
JEFFERSON 051
PLAQUEMINES 075
719 WEST DELTA AREA
720 WEST DELTA AREA SOUTH ADDN
721 SOUTH PASS AREA
722 SOUTH PASS AREA SOUTH ADDN
723 SOUTH PASS AREA EAST ADDN
ST TAMMANY 103
ORLEANS 071
ST BERNARD 087
MISSISSIPPI
LOUISIANA
730 CHANDELEUR SOUND AREA ADDN
727 CHANDELEUR SOUND AREA
728 CHANDELEUR AREA
729 CHANDELEUR AREA EAST ADDN
726 BRETON SOUND AREA
725 MAIN PASS AREA
724 MAIN PASS AREA SOUTH & EAST ADDN
N

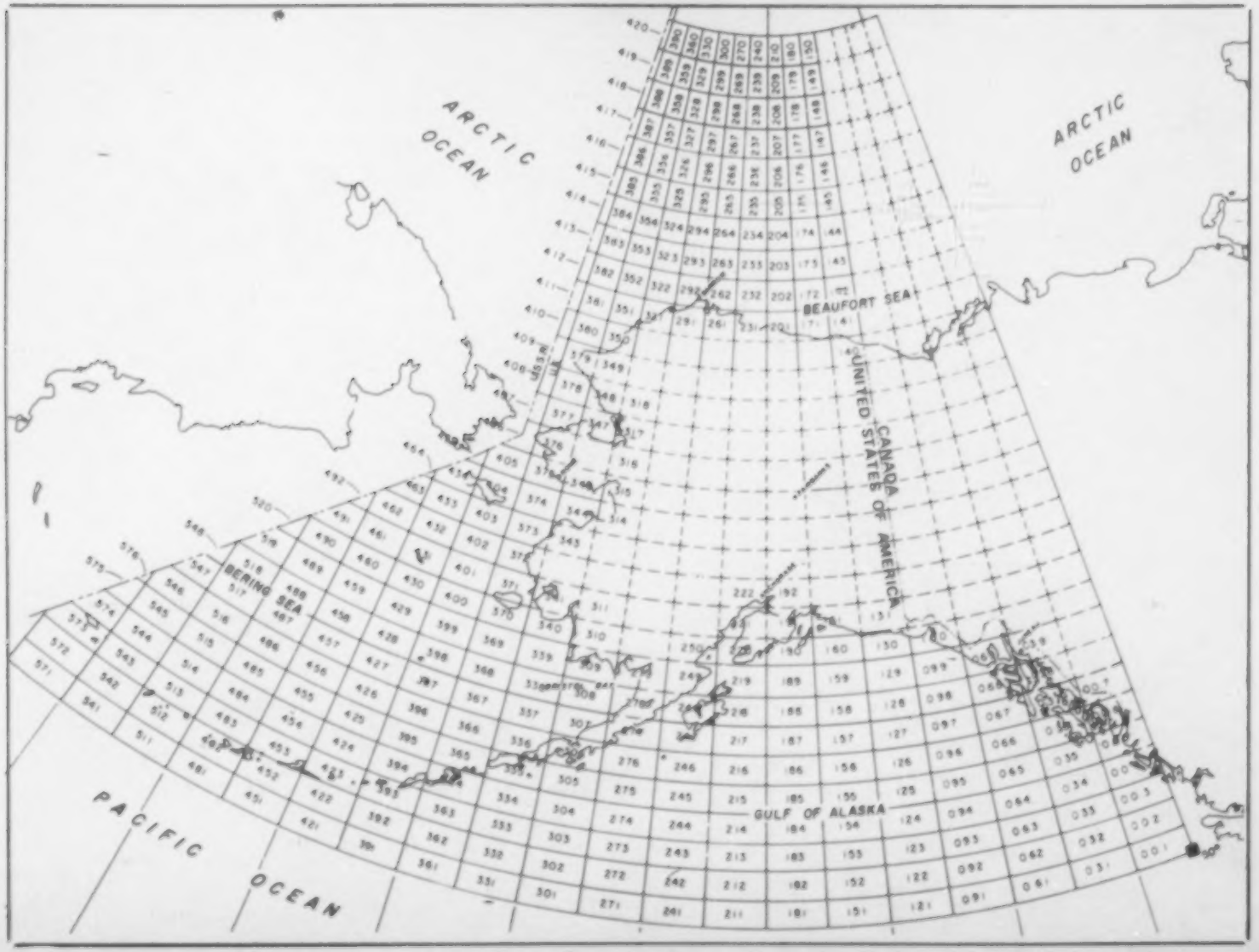
MAP VI
SUBDIVISIONS OF NEW MEXICO

MAP VII
SUBDIVISIONS OF TEXAS

MAP VIII
TEXAS OFFSHORE

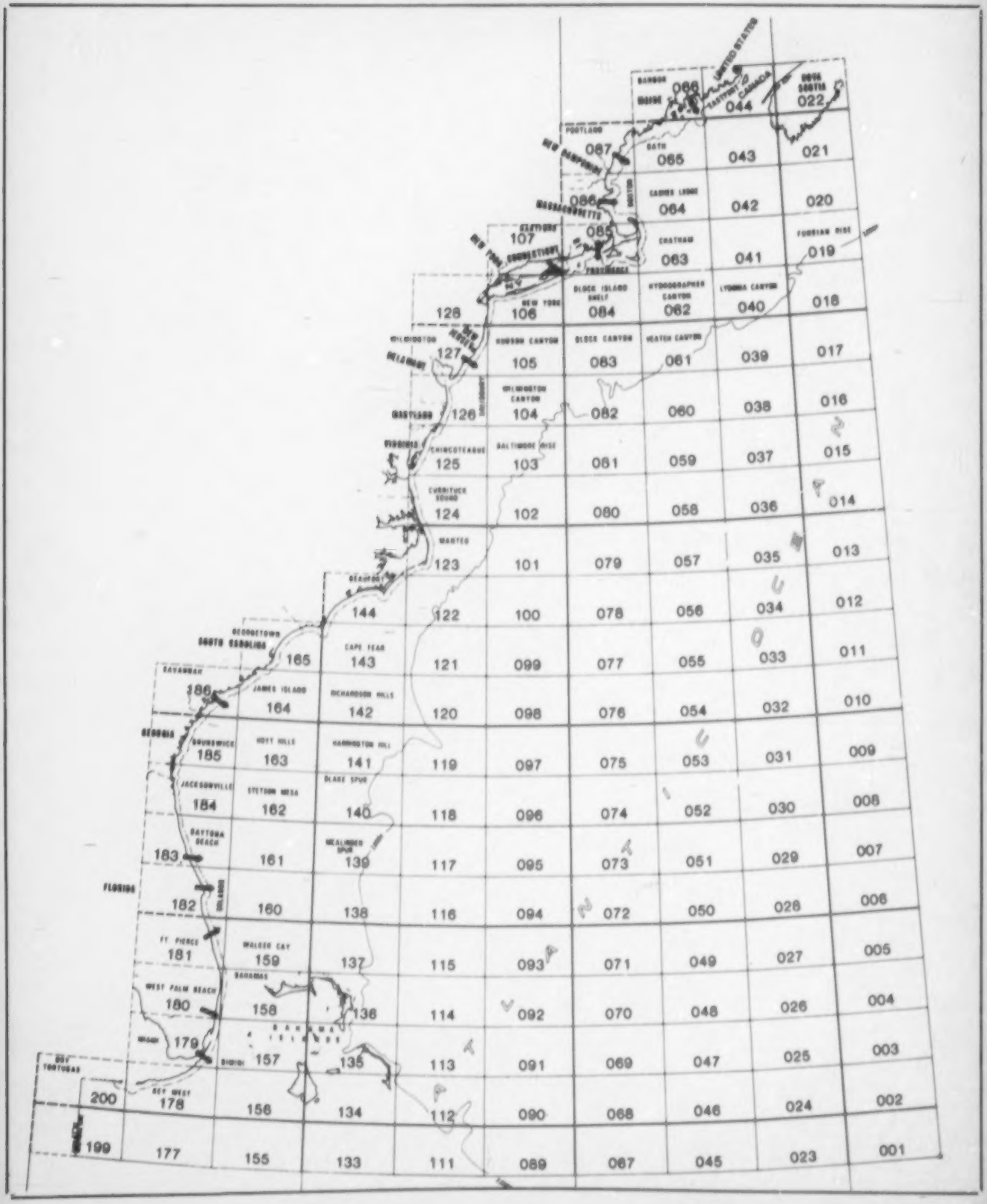


MAP IX
SUBDIVISIONS OF
OFFSHORE FEDERAL WATERS
ALASKA



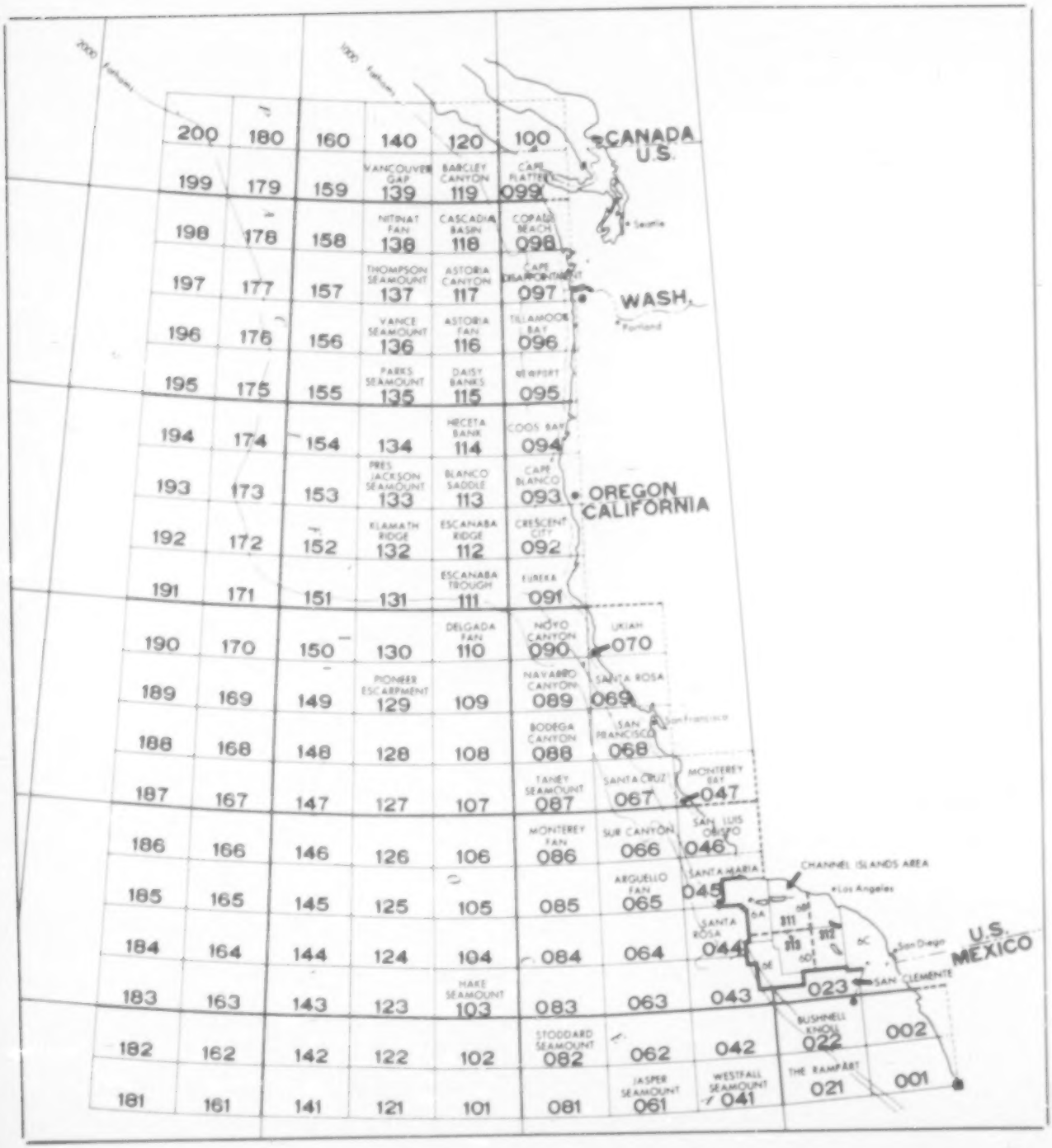
APPENDIX G, P.10

MAP X
SUBDIVISIONS OF OFFSHORE FEDERAL WATERS
ATLANTIC COAST



MAP XI
SUBDIVISIONS OF
OFFSHORE FEDERAL WATERS
GULF OF MEXICO—Northern

MAP XII
SUBDIVISIONS OF
OFFSHORE FEDERAL WATERS
PACIFIC COAST



JOINT ASSOCIATION SURVEY METHODOLOGY

API publishes annual estimates of drilling costs in the U.S. based on a sample of approximately 47 % of all wells drilled and 63 percent of total expenditures for well drilling. The results, published in the Joint Association Survey (JAS), show estimated average drilling costs and total drilling expenditures by state (or other political region), by depth, and by well type. API has cost data only for those wells within the JAS sample. Drilling costs for wells not reported in the sample must be estimated. The API receives information on depth, type, and location of non-reported wells, and uses this information along with reported costs for similar wells to estimate costs for non-sample wells.

REGRESSION ESTIMATES OF WELL COSTS. The current JAS methodology is a modified version of the methodology used since 1978. Costs for non-reported wells are modeled as a function of the depth of the well, the type of well, and the general location of the well. A stepwise general linear regression is fit to the sample data, with the statistical routine chosing the variables that best fit the data for the particular type of well and area. The routine chooses up to three forms of the depth term; inverted depth, depth, and depth squared, and among a set of dummy classification variables for type of well, exploratory or development,single or multiple completion. The overall sample for any area is first stratified by type and separate regressions are run for each type of well. A regression is also run for the total sample for the area to insure that an alternative is available should the separate models prove inadequate.

The general functional form of the regression equation is:

$$(1)\ \log(\text{cost per foot}) = a + b\ 1/\text{depth} + c\ \text{depth} + d\ \text{depth}^2 + p_1 I_1 + \ldots + p_9 I_9$$

where depth is in thousands of feet, and the I1 through I9 are indicator variables for well type.1

Except for the 1/depth term, this equation is a polynomial, a functional form often used in regression analysis when an *a priori* functional form has not been specified. (Higher order polynomials were investigated, but did not noticeably improve the fit). The 1/depth term helps reflect the decreasing cost per foot observed at shallower depths in some areas. (As depth increases, 1/depth decreases in size, so the term's contribution to estimated cost per foot can be large for shallow depths, but becomes small at greater depths).

The inclusion of indicator variables allows the level of costs to vary by well type. Since the above equation is in log form, different well types are estimated to be proportional to one another, with the proportion being determined by the regression coefficients of the indicator variables. (When oil, gas, or dry wells are regressed separately, fewer indicator variables are needed since there are fewer well types involved in each regression).

Because the regression equation is in log form, estimates on it will be biased downwards. Multiplying the original estimates by the correction factor

$$(2)\ \frac{\text{sum of actual costs for sample}}{\text{sum of estimated costs for sample}}$$

yields unbiased estimates.

PROCEDURE. Once the JAS sample data have been collected and verified, the regression estimates for each geographic area are made using equations (1) and (2). In some areas, oil, gas, and dry wells are combined in one equation. When the sample is large enough, a separate equation is used for each of these three well types. Inevitably, some non-sample wells fall outside the depth range of the sample. Since, statistically speaking, there is no reason to expect the regression estimates to be "reasonable" for these depths (or area) where there is no sample, some of these costs must be estimated independently based on costs in similar areas or on previous year's data. This was necessary for approximately 4.2 percent of all unreported wells in 1988.

1 An indicator variable takes on the value 1 if the observation is a member of a certain class, and a value of 0 if it is not. In the above equation, the nine indicator variables identify whether a well is one of the ten well types (for example, exploratory oil single completion, development gas multiple completion, exploratory dry, and so on). The tenth well type is identified when all indicator variables are 0.